



Preparedness of Central Sulawesi Province General Hospital in The Dealing of Disasters

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Abstract— Central Sulawesi is one of the regions in Indonesia that is prone to disasters. In September 2018, there was a disaster in Central Sulawesi which resulted in damage and losses of up to IDR 18.48 trillion. In Palu City, 2,141 people died, while 44 health facilities damaged by the earthquake, tsunami and liquefaction were recorded. **Purpose:** The research objective was to determine the preparedness of the Regional General Hospital of Central Sulawesi Province in facing disasters. **Methods:** Qualitative methods with a case study approach and quantitative methods with descriptive models by using the Hospital Safety Index checklist. **Data collection** through triangulation techniques namely in-depth interviews, observation and documentation using interview guidelines. **Research Results and Discussion:** The research found that the readiness of human resources was sufficient, while the facilities and means for handling disaster victims were still lacking. Disaster management SOP is still lacking. Budget readiness in handling disaster victims is not specifically budgeted. Hospital health workers do not yet know about disaster preparedness, especially their duties and functions as a hospital disaster response team. Corrective action is required in the short term. The status of preparedness is adequate, but health facilities are judged to be resilient to patient safety and hospital staff and other essential services are at risk of functioning during and after a disaster. Overall, of the 3 stages in the preparedness process, there are still many team members who do not know these stages including other health workers. **Conclusion:** It is recommended to immediately form a new disaster management team in the form of a Disaster Management Preparedness Team for Hospitals (Hospital Disaster Preparedness Team) and disseminate it to all Team members including all hospital employees, make improvements to HDP documents and simulation and training is necessary at least once a year. improve team preparedness in disaster.

Keywords— Hospital, preparedness, disaster, emergency response

I. INTRODUCTION

Based on world data compiled by WHO, in the last 10 decades, disasters have killed more than 1.1 million people in 4000 cases of large-scale natural disasters (WHO, 2012). The National Disaster Management Agency (BNPB) noted that 148.4 million Indonesians live in earthquake-prone areas, 5 million in tsunami-prone areas, 1.2 million people in areas prone to volcanic eruptions, 63.7 million people in flood-prone areas, and 40.9 million people live in areas prone to landslides. Central Sulawesi is one of the regions in Indonesia that is prone to tsunami disasters and it is

necessary to have a preventive and mitigation action plan that reduces potential risks.

On September 28, 2018, Palu City, Donggala Regency, Sigi Regency and Parigi Moutong Regency in Central Sulawesi and the surrounding areas were rocked by an earthquake with a strength of 7.4 on the Richter Scale with the center on the Palu Koro fault line precisely located 26 km north of Kab. Donggala and 80 km northwest of Palu City with a depth of 10 km. This earthquake caused a tsunami with a wave height of 0.5-3 m. Not only that, this earthquake shock also caused the phenomenon of liquefaction in four places, namely Balaroa, Petobo, Jono Oge and Sibalaya. Based on BNPB's calculations on October 26, 2018, Central Sulawesi Province suffered damage and losses of up to IDR 18.48 trillion, particularly in 4 affected districts / cities, namely Palu City, Donggala Regency, Sigi Regency, and Parigi Moutong Regency. The biggest loss and damage came from settlements followed by the economic sector. The impact of this disaster requires a recovery plan through rehabilitation and reconstruction (in-situ), as well as relocation and development of new areas (ex-situ). Therefore, the President of the Republic of Indonesia issued a Presidential Instruction for the implementation of the Acceleration of Post-disaster Rehabilitation and Reconstruction in Central Sulawesi and its surroundings (Central Sulawesi Provincial Health Office, 2018).

The losses suffered by Palu City were 2,141 people who died, while 44 health facilities damaged by the earthquake, tsunami and liquefaction consisted of 1 UPT Lab Kesda, 14 hospitals, 12 health centers and 17 pustu (Central Sulawesi Provincial Health Office, 2019). Hospitals are usually the main destination for seeking help, so the hospital is immediately filled with victims. In the early post-disaster phase, hospitals usually need additional service capacity. Thus, it is important for the hospital to make an implementable Disaster Plan as a guide for all components in the hospital to provide services that meet quality and quantity standards.

Disaster Plan in hospital will prevent unsafe health service practices for disaster victims. Planning for preparedness to face post-disaster conditions should include not only in the pre-hospital but also in the area of the hospital and post-hospitalization (Eka, 2007). The role of hospitals is very important in the emergency response period, therefore the health service infrastructure must be adequate.

The hospital is the main person responsible for saving the lives of disaster victims. When a disaster occurs, disaster-affected communities rely on hospitals to provide fast and effective medical services to many victims and also act as a vital vehicle for diagnosis, medical treatment, follow-up, both physical and psychological to reduce morbidity and mortality.

Based on my preliminary study, there was a huge loss from the earthquake on September 28, 2018. Where many victims could not be saved because of the damage to the building. When a disaster occurs, the facilities owned by the hospital to provide assistance to earthquake and tsunami victims are very limited. This situation is due to the large number of equipment damaged by the earthquake, so that the facilities to be used are damaged and cannot be used when carrying out assistance to earthquake victims. This is what is interesting to be used as research. So that the author wants to know how to implement the emergency response carried out by the Regional General Hospital in Central Sulawesi in dealing with disasters, be they natural disasters or man-made disasters.

II. METHOD

The method used in this research is a qualitative method with a case study approach and a quantitative method with a descriptive model.

III. RESULT AND DISCUSSION

1. Torabelo Sigi Regional General Hospital

Characteristics of Informants at the Torabelo Sigi Regional General Hospital

Table 1 Number of Employees at the Torabelo Sigi Regional Hospital

according to their Education and Professional Status in 2017

Coordination of emergencies and disaster management at the Tora Belo Sigi Regional General Hospital

Table 2 shows that the results of the functional preparedness assessment of the respondents from 6 items with an index group score of 0.5. In this regard, a committee team has been formed according to the directions at the Torabelo Regional Hospital in collaboration with the Faculty of Medicine, Gadjah Mada University in making disaster management documents. To coordinate emergency response and recovery activities during a disaster, the committee consists of TPM commanders represented by 5 departments, but they do not yet understand the functions and responsibilities of each and their individuals as a whole regarding emergency and disaster management such as in preparedness, response and recovery activities. have a program plan or action to strengthen hospital readiness because training and

simulations have not been carried out by the Torabelo Regional General Hospital, there are arrangements for a coordination mechanism between the Torabelo Regional General Hospital and the Regional Disaster Management Agency, the Health Office (Sigi district, city hammer and Central Sulawesi province), the police in providing assistance to divert patients in and out as well as assistance of medicines and medical equipment, but not fully operational because of the lack of coordination between the

center and the region itself and coordination between Rumah Sak it General of the Torabelo Region with other hospitals in the city of Palu in conducting patient referrals.

This is in line with Dini's research, (2017) that the coordination of emergency and disaster management has a score of 0.48 at the Regional General Hospital. Rasidin's doctor has a disaster management command team consisting of 4 departments, the Hospital Disaster Plan document has not been tested and evaluated. , as well as the absence of training and simulation of emergency and disaster response, there is a coordinating mechanism procedure between the local emergency and disaster management agency. This is not in line with the research by Santosa & Rianita, (2012), which states that emergency coordination and disaster management has a score of 0.81 at PKU Bantul General Hospital, which has a disaster management team consisting of 6 departments that have their respective functions and responsibilities. respectively and has conducted training and simulations in disaster emergency response response and assessment of functional capacity including category A with a score of 0.66.

Planning for emergency response and disaster recovery at the Tora Belo Sigi Regional General Hospital

Table 2 shows that the results of the functional preparedness assessment of the respondents from 4 items with an index group score of 0.12. This is the guideline for the Hospital Disaster Planning for the Torabelo Regional General Hospital, which is still in 2019 but has not been tested and corrected for documents, in the Hospital Disaster Plan guidelines there are procedures for activating and deactivating plans for emergency/disaster response plans in the form of training and evaluation.

This is in line with the research by Jahangiri, Izadkhah, & Lari, (2014) that the assessment of emergency response planning and disaster recovery has a score of 0.13 in a hospital in Tehran that has a Hospital Disaster Plan document but has not been tested on this document and the Team it has been appointed that training and simulations on emergency response and disaster management have not yet been carried out. This is not in line with Santosa & Rianita's research, (2012), that the assessment of emergency response and disaster recovery planning has a score of 0.8 in the PKU Bantul General Hospital, which has a Hospital Disaster Plan document, there is a hospital emergency response and recovery plan procedure, and has procedures for activating and non-activating it. activate the plan and have an emergency / disaster response plan exercise in the hospital every year.

Management of communication and information at the Torabelo Sigi Regional General Hospital

Table 2 shows that the results of the functional preparedness assessment of the respondents from 3 items with an index group score of 0.33. This is the communication system both internal and external to the Tora Belo Regional General Hospital in a responsive state emergency and disaster cannot be used, procedures to communicate publicly and the media in an emergency or disaster and the director of the Tora Belo Regional General Hospital or Koor. Public Relations is the spokesperson who has been appointed in conveying information in an emergency or disaster. The spokesperson has not received any training in media delivery, procedures for receiving and conveying patient

information in an emergency or disaster. Procedures are implemented to ensure medical records up to patient data and storage to maintain confidentiality of information, however all employees have not undergone training and disaster simulations.

This is in line with Dini's research (2017) that the assessment of communication and information management has a score of 0.30 at the Rasidin Regional General Hospital, there are internal and external communication procedures in an emergency, procedures for communicating with the public and the media with the spokesperson by the hospital director in conveying patient information. This is not in line with the research of Jahangiri et al., (2014) that the assessment of communication and information management has a score of 0.17 in a Tehran hospital that does not have procedures for communicating with the public and the media in an emergency and management of patient information in a disaster.

Human resources of the Torabelo Sigi Regional General Hospital

Table 2 shows that the results of the preparedness assessment of the respondents from 3 items with an index group score of 0.5. This is due to the fact that there are procedures for recruiting personnel, the duties of each personnel and in emergency recovery as well as in handling disasters and a lack of human resources. All staff on duty are only given emergency tents to rest, eat, drink, worship and fulfill other needs during an emergency because the room cannot be used during an emergency and there has not been any training and disaster management simulation at the Torabelo Regional General Hospital.

This is in line with Suparni & Lestari's research, (2017) that the human resource assessment has a score of 0.5 in Bandung Hospital, there are procedures for recruiting personnel and having a fast reaction team, knowing the duties of each personnel and recovery in an emergency and on duty. in disaster management. This is not in line with Dini's research, (2017) that the assessment of human resources has a score of 0 at the Regional General Hospital, doctor Rasidin, that has not made the Hospital Disaster Plan document so there are no procedures for recruiting emergency response and disaster recovery personnel. No room is provided for personnel to rest in a disaster.

Logistics and finance of the Torabelo Sigi Regional General Hospital

Table 2 shows that the results of the functional preparedness assessment of the respondents from 3 items with an index group score of 0.5. There are procedures to ensure the availability of ambulances and ambulance access at the Torabelo Regional General Hospital which has 2 units and 1 other vehicle if needed, food and beverage management in an emergency is provided at the Nutrition Installation and Donation Post and has a usable budget. during emergencies and disasters that the budget is sufficient to implement according to the existing plan, data collection on the number and availability of medical and other equipment is recorded. As well as the Torabelo hospital has additional financial resources but there is no financial evidence when the disaster lasts more than 72 hours. This is not in line with Dini's research (2017) which states that logistics and financial assessments have a score of 0.1. Rasidin's Regional General Hospital is available.

Transportation in an emergency is an ambulance unit, there are no food and beverage management procedures in an emergency and a draft financial budget for emergencies and disasters has not been prepared.

Support services and patient care for the Tora Belo Sigi Regional General Hospital

Table 2 shows that the results of the preparedness assessment for respondents from 5 items with an index group score of 0.3. This is due to the procedures for continuous service during emergency and critical conditions at the Torabelo Regional General Hospital. Doctors and nurses are trained according to procedures for critical patients for emergencies, but personnel cannot be guaranteed to be available around the clock in the Emergency Room because there is no written evidence.

The location of the triage in the Emergency Room Unit in handling patients, but a large place has not been determined to be used in the triage area outside the Torabelo Regional General Hospital, there are Standard Operating Procedures in carrying out the referral system, transfer and receiving patients so that doctors and nurses have received training in treating patients but it is not yet effective because a simulation has not been carried out in an emergency or disaster situation. There is no room for expansion in the handling of mass casualties because at the time of the disaster the room at the Torabelo Regional General Hospital could not be used and all patients were transferred to a safer place around the parking lot for emergency services and providing 2 emergency tents. For medical supplies, there is a pharmacy at the Torabelo Regional General Hospital so that there is no shortage of supply for a week.

This is in line with Dini's research (2017) that assessment of support services and patient care at the Regional General Hospital, doctor Rasidin Padang, has a score of 0.3. The Regional General Hospital of doctor Rasidin has emergency and critical service procedures, a referral system, transfers and admissions of patients, there is a triage area for situations emergency and disaster, but staff have not been simulated in an emergency or disaster situation. This is not in line with the research of Jahangiri et al., (2014) that the assessment of support services and patient care at Iran's Tehran Hospital has a score of 0.1. Emergency and critical care procedures have not been made so that the Hospital Disaster Plan document does not exist, a triage area for emergencies. and disaster, however, staff have not conducted simulations in emergency or disaster situations.

Evacuation and security of the Torabelo Sigi Regional General Hospital

Table 2 shows that the results of the preparedness assessment for respondents from 2 items with an index group score of 0.25. This is because there are procedures for evacuating patients, visitors and staff to the location safe with the support of the medical. There are criteria for activating triage for patient evacuation. However, staff training has not been carried out and there are emergency procedures to ensure the safety of patients, employees and facilities in the form of Hospital Disaster Plan documents, but security officers have been trained in the form of safety for volunteers and medical personnel who come and the procedure has not been tested.

This is in line with the research of Martono, Ratnawati, & Setyoadi, (2016) that there have been procedures for the evacuation and triage processes carried out jointly differently in the disaster area than those carried out at the Kariadi Doctoral Center General Hospital and Roemani Hospital. Nurses carry out the evacuation and triage process for disaster victims by prioritizing groups with special needs (vulnerable groups) and not groups with special needs (not vulnerable groups). The hospital has managed safety and security well, there are written procedures related to this. This is not in line with Dini's research (2017) that the emergency security at the Regional General Hospital of doctor Rasidin is still low with a score of 0 using the HSP assessment because there are no written rules regarding emergency security procedures.

Anutapura Regional General Hospital

Characteristics of Informants at the Anutapura Regional General Hospital

The informants in this study were 5 people, consisting of 1 key informant, namely the head of the technician team, 3 regular informants, namely 1 head of the disaster brigade team, 2 staff members of program implementation, and 1 additional informant, namely health staff of Anutapura Hospital Palu. Key informants live in Palu City and the others are domiciled in Donggala Regency. Information retrieval was carried out using in-depth interviews or in-depth interviews, and documentation study was carried out. In detail, the informants can be seen in the following table.

Coordination of Emergency and Disaster Management at the Anutapura Regional General Hospital

In the 2012 Minimum Service Standards (SPM) report at Anutapura General Hospital, Palu, there is a Hospital Disaster Management team. This team was formed based on the Decree (SK) of the Director of the General Hospital of Anutapura Palu Number 445 / 09.21

/ UDT concerning the Establishment of the Committee for Work Safety, Fire and Disaster Alert (K3). This team was formed only to meet the accreditation needs at that time. Among the names contained in the SK, some were no longer active because they moved to work and were sick. There is no special room as a team secretariat. There is no visible organizational structure.

In-depth interviews were conducted by researchers with regular informants regarding hospital preparedness in dealing with disasters, especially coordination of emergencies and disaster management. In accordance with the following informant's statement: "If the coordination is carried out at the Anutapura General Hospital, we have a siren that will automatically sound when an emergency occurs" (PI, 4 February 2020). There are 12 sirens, 6 indicator lights and 2 emergency buttons.

"For coordination, if at the hospital, we between the teams immediately move on and prioritize patients first, so that there is already an evacuation route. If it is far from the gathering point, we take it first to the nearest safe place" (IP, 4 February 2020). The Anutapura Palu General Hospital has an evacuation route that has been in place according to the hospital's needs so that the hospital needs are met and make it easier for everyone in the hospital, both health workers and visitors to come "If our team is a disaster brigade, we will be more focused. If there is a disaster, we will immediately

respond because we have attended training. If I'm not mistaken, this is included in the disasterpland. Everything has been arranged there. The first step we take is coordination" (SR, 4 February 2020).

Based on the above statement, all informants used to provide an explanation of the coordination lines that were prescribed at the Anutapura hammer General Hospital according to existing work procedures or standard operating procedures (SOPs). As for the coordination and disaster management pathways according to the key informant, according to the results of the interview that the key informant has expressed, is as follows: disaster brigade. "Every room has hospital officers who work according to their main duties and functions, when a disaster occurs, sirens will sound" (DE, 1 February 2020).

Based on in-depth interviews conducted by researchers with ordinary informants, all informants said that the coordination carried out by the Occupational Safety and Health (K3) team of the Anutapura Palu General Hospital was carried out with existing SOPs. In accordance with the following informant's statement: "Yes, so when there is a disaster, we hospital workers follow the instructions depending on the sound of the sirens and the orders issued by the hospital" (SR, 4 February 2020).

"If we do coordination here, when a disaster occurs or it is a fire or a natural disaster, we still have one route, instructions, there will also be a siren later, so if it is a siren, it means there is an accident" (IP, 4 February 2020).

"In my opinion, the coordination path is through the network and direct special meetings" (PI, 4 February 2020). The coordination line referred to by all informants is by using the sirens in the hospital. There are 12 sirens,

6 indicator lights and 2 emergency buttons. So that when a natural or artificial disaster occurs, the coordination channel is carried out through the existing coordination channel. Sirens serve to warn the public of the dangers of a natural disaster and are used for emergency service vehicles such as ambulances, police and fire engines and as a hospital facility. While the indicator light functions as a warning sign, and the emergency button functions in an emergency.

Emergency Response Planning Anutapura Regional General Hospital

All informants stated that the emergency response planning process was carried out well. In accordance with the statement of the informant: "If we prioritize patients first when there is an emergency, such as a fire or natural disaster, such as the 28 September incident yesterday. Most of those who died were nurses and not patients because from the hospital all health workers have attended emergency response training" (DE 1 February 2020).

"For this emergency response planning, the hospital has conducted emergency response training, so all hospital staff are trained so that if there is a danger or emergency, they will know what they are doing" (IP, 4 February 2020).

"We all hospital staff have attended emergency response training, so for urgent situations, God willing, we prioritize patients" (PI, February 4, 2020).

Emergency response planning referred to by all informants is by first saving existing patients in accordance with the training that has been followed by all health officers

in the hospital. In accordance with the incident on 28 September 2018, the tsunami and earthquake that hit Palu, the Anutapura General Hospital was one of the hospitals that suffered severe damage, but many patients were rescued by nurses and other health workers. It can be seen that the emergency response planning process in the hospital is carried out well so that when a disaster occurs, the patient must be saved.

d. Evacuation and Security of Anutapura Regional General Hospital

The results of interviews by researchers with informants related to evacuation and security. All informants stated that the evacuation process was good. In accordance with the statement of the informant: "If the evacuation and security have been carried out, it seems like there was an incident when a room was burned, so what was saved first was that our patient moved to a somewhat safe area because if he was taken to the gathering point it was far" (DE, February 1, 2020).

"We already have evacuation and it has been implemented so that in every room and area in this hospital there is an evacuation route" (IP, 4 February 2020).

From all the interviews with the informants above, the recommendations given are to improve safety behavior and maximize teamwork so as not to increase victims in countering more disasters. In accordance with the incident on 28 September 2018, most of the victims found were working health workers. in the hospital

because the hospital staff pay more attention or prioritize the safety of these patients.

Undata Regional General Hospital

Characteristics of Informants at the Undata Regional General Hospital

There were 7 informants in this study, consisting of 1 key informant, namely the Director of the Undata Hospital Palu represented by the head of the Emergency Response Team Field, 4 regular informants, namely members of the emergency response team consisting of 1 secretary of the emergency response team, and 3 members of the emergency response team, and additional informants, namely 2 nurses at the Undata Regional Hospital, Palu. All of the informants reside in Palu City. Information retrieval is carried out using the indepth interview method or in-depth interviews, as well as direct observation and documentation. In detail, the informants can be seen in the following table;

Table 4 Characteristics of Informants at the Undata Regional General Hospital

Identification of Disaster Risk at the Undata Regional General Hospital

The results of the interview stated that the identification of disaster risk in hospitals is like the following statement: "We have made 2 methods to identify disaster risks, the first is the Hazard Vulnerability Assessment (HVA) and the Hospital Safety Index (HSI) because those 2 are also requested as documents. for accreditation" (H, 01 February 2020).

Hospital staff in charge of identifying disaster risks according to the results of the interview are as follows: "If

the one who identified yesterday was from Occupational Safety and Health, I myself did it by distributing a check list to each room through eight programs in Hospital Occupational Health and Safety. In accordance with Permenkes 66 of 2016, it starts with safety security, so starting from the availability for the visitor's name tag or id card, then from the CCTV installation then the visiting hour rule is implemented or not then the safety of the vehicle, both from officers and visitors because here is still a high number of theft motor vehicle. He did it himself

with the help of the head of the respective rooms so we only distributed it one week and then collected it again, we did a scoring and identified what had become deficient" (H, 01 February 2020).

The frequency of disaster risk identification based on interviews is as follows: "We usually do it every semester, so one year is twice. Alhamdulillah, we are doing this accreditation regularly. But the result is that sometimes there is no follow-up from the management, only in the form of a report" (H, 01 February 2020). The results obtained from the disaster preparedness research at the Undata Palu Regional General Hospital were that disaster risk identification had been carried out, the identification of disaster risk was each unit in the hospital, carried out every semester or 6 months and the process was by distributing The checklist sheets for each room are filled in by the rooms, then the checklist sheets are collected again for further disaster risk assessment.

The identification of disaster risks at the Undata Regional General Hospital in Palu is good enough, it just needs improvement in the method of identification and those who do the identification are not the people in each room, but the K3RS team should have identified the disaster risk, because they are who knows more about the identification of disaster risks. According to Khambali (2017), risk identification is the process of recognizing the most likely threat to the object of study and analyzing the vulnerability associated with the threat of a disaster. This is not in line with Heather (2019), military health care personnel for disaster preparedness do not identify risks before a disaster occurs.

Disaster Risk Assessment at the Undata Regional General Hospital

Undapa Palu Regional General Hospital has conducted a disaster risk assessment based on the following interview results: "Yes, conducted a risk assessment of ee facilities. But we are weak in coordination, coordination between fields. We are not unsupported. So that what we are trying to do for the hospital is hampered there. So what is important is the support from the management of the Hospital Occupational Health and Safety Management System. Even though the response was good, Pak Hendra was great to make. Yes doc. The occupational safety and health in hospitals, especially in Java, from January they immediately simulated, so that the officers, especially nurses in the Emergency Unit, knew how to handle the patient's case. Because yesterday what happened was the number of 80 nurses in the Pondok Indah hospital recently because they were exposed to the 2 patients, because 80 of them did not use Personal Protective Equipment. So if there isn't, let's start. So once this happens, that's why I emphasize it to your friends too, if you are a nurse, don't you want to work without personal protective equipment. because once we hit it, we suffer, no one is this we ourselves are victims. Indeed,

we have to be loyal, support the service, we want to support the service, we don't refuse, but we know the risks, the dangers, if we know the risks, we know the dangers, meaning if we want to work, we have to be ready, prepare ourselves to work it out. We don't want to be late heroes, our survivors can do help, 3 4 days we are suffering. Management is the most change, looking for a new one for external disasters, handling the plague anyway. Only yesterday, 2 weeks ago, I submitted

it, to create a scenario, okay, so the training 2 days ago I gave the material" (H, 01 February 2020).

The results obtained from the disaster preparedness research at the Undata Palu Regional General Hospital were that a disaster risk assessment was carried out by each unit in the Undata Palu Regional General Hospital in the same way as identification, namely distributing checklists to each unit. and the assessment is carried out in a place that has a high risk of disaster or is prone to disasters. The disaster risk assessment at the Undata Regional General Hospital in Palu is quite good, but it still needs improvement in terms of human resources for a more maximal disaster risk assessment and development of the research methods used.

According to Khambali (2017), risk assessment is a process which includes evaluating physical and environmental conditions and assessing the relative capacity of potential disaster threats. Risk Assessment is carried out on the achievement of annual goals and targets in an effort to achieve the program and makes periodic reports every semester which are submitted to the Minister through the secretary general (Permenkes, 2019). This is in line with research conducted by Pratiwi (2012) which states that risk assessment is carried out as an effort by the hospital to minimize risks in the hospital. This is not in line with research conducted by Valeria (2019) that the readiness of hospital blood banks in Italy is inadequate due to the absence of blood reserves and the absence of identification and risk assessment before a disaster occurs.

Disaster Risk Mapping at the Undata Regional General Hospital

Based on the results of interviews with the carrying out of disaster risk mapping at the Undata Regional General Hospital, Palu, which is as follows: "Yes, it is risk mapping" (H, 01 February 2020) and the one who carried out the mapping is: "mapping" (H, 01 February 2020). The results obtained from the disaster preparedness research at the Undata Palu Regional General Hospital were that a risk mapping had been carried out by the Hospital Occupational Safety and Health team by analyzing and assessing the results of disaster risk identification which was then made a risk register so that it is known which areas or rooms have a high potential for disaster risk. The risk mapping at the Undata Palu Regional General Hospital is quite good, marked by the involvement of people outside the hospital in disaster risk assessments. It's just that it needs support from management to carry out disaster risk identification, disaster risk assessment, and the final stage is risk mapping. Good risk mapping results from a good disaster risk identification and assessment process as well. So, there is a need for management support for the process of disaster risk identification and disaster risk assessment. According to Khambali (2017), risk mapping is a description of a community or a geographic area that identifies places and

buildings that may be affected by a disaster. The advantage is that this technique can help determine common disasters, develop criteria for decision making, provide data on the occurrence of disasters that occur, and so on. Risk mapping is a way of identifying potential impacts on safety and health hazards so that you can find out potential hazards through hazard mapping points which are the main focus, namely identification, priority and solving problems in certain

ways and methods so that results are obtained in the form of images that explain the location according to the objectives. that you want to get (OSHA, 2013). This is in line with research conducted by Walangitan (2014).

Risk mapping is carried out to classify any places that have a high potential hazard. Risk mapping is usually done by the same people who have carried out risk identification and assessment. This is not in line with the research conducted by Husna (2012), which states that one of the factors affecting disaster preparedness at the Banda Aceh Regional Hospital is that the risk mapping carried out by the hospital is not optimal and is only in the form of socializing which locations have high

IV. CONCLUSION

a. Based on the results of research conducted on the Status of Functional Preparedness at the Regional General Hospital of Tora Belo, Sigi Regency, in the face of disasters, it was concluded that based on the Hospital Safety Index, the functional preparedness index score at the Tora Belo Regional General Hospital was 0.36. The Hospital Safety Index table at the Tora Belo Regional General Hospital for the Functional Preparedness Index is classified as B (0.36–0.65) meaning that corrective action is needed in the short term. The status of preparedness is adequate, but health facilities are judged to be resilient to patient safety and hospital staff and other essential services are at risk of functioning during and after a disaster.

b. The readiness of facilities, facilities and infrastructure in handling disaster victims is still lacking, the Anutapura Regional General Hospital does not yet have the main or core facilities, facilities and infrastructure needed in disaster management or in an emergency situation. Medical facilities or equipment are sufficient in accordance with the capacity of the installation bed Emergency department, the main or core advice has been planned to be completed at the new Hospital. However, evacuation and security have been carried out well by the team and health workers in the hospital in accordance with the statement of the informant who was there and was implemented during the 28 September 2018 incident so that most of the victims found were nurses who worked in the hospital while the existing patients could be saved. well by these health workers.

The identification of disaster risks at the Undata Regional General Hospital is good enough. However, it still needs to be.

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