

Medical Personnel Preparedness and Response in Flood Disaster Management

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Abstract

Background: Flooding is one of the most common natural disasters in Indonesia. Floods can have far-reaching impacts, not only damaging infrastructure and disrupting the economy, but also posing serious health risks to affected communities, such as diarrhea, leptospirosis, respiratory infections, and skin diseases associated with poor sanitation conditions and water pollution due to flooding. In the face of flood disasters, the preparedness and response of medical personnel is a very important element in reducing health impacts.

Objective: To evaluate the preparedness and response of medical personnel in flood disaster management by identifying various factors that influence the effectiveness of emergency response.

Methods: The method used was a literature review taken from several sources with a limit of 2019-2023.

Results and discussion: As health workers and first responders and service providers in disaster emergency response are required to have higher disaster preparedness than other teams. The implementation of disaster preparedness is not only the responsibility of the government, but also involves community participation, especially health workers. The effectiveness of disaster response is highly dependent on good coordination between institutions, including the government, BNPB, non-governmental organizations, and local communities.

Conclusion: The preparedness and response of medical personnel is a crucial component in flood disaster management. Medical personnel, especially nurses, have a central role as first responders in providing emergency care, reducing mortality, and preventing the spread of diseases that often emerge post-disaster.

Keywords: preparedness; medical personnel response; flooding

Introduction

Flooding is one of the most common natural disasters in many parts of the world, including Indonesia. Floods can have far-reaching impacts, not only damaging infrastructure and disrupting the economy, but also posing serious health risks to affected communities. According to data from the National Disaster Management Agency (BNPB), floods in Indonesia often cause huge material losses, thousands of casualties, and an increasing number of patients requiring immediate medical care. Floods also often trigger disease outbreaks, such as diarrhea, leptospirosis, respiratory infections and skin diseases, which are associated with poor sanitation conditions and water pollution caused by flooding.¹

In the face of a flood disaster, the preparedness and response of medical personnel is a very important element in reducing health impacts. Trained medical personnel and a prepared service system can speed up the treatment process, reduce mortality, and avoid the spread of diseases that can worsen the situation.² However, despite the preparations made for disasters, major challenges often arise in the event of a disaster, such as limited resources, lack of coordination between agencies, and terrain conditions that make access to affected areas difficult.

The preparedness of medical personnel in flood disaster management includes a series of measures to ensure that medical personnel can provide optimal services during a disaster. This includes regular training, evacuation planning, as well as the provision of adequate medical equipment. Disaster response, on the other hand, involves dealing with victims who need immediate medical attention, as well as efforts to control and prevent post-disaster illnesses. It is therefore important to evaluate and analyze the medical preparedness and response system in the face of flood disasters to understand the challenges faced and identify effective solutions.

Based on the above, this article aims to evaluate the preparedness and response of medical personnel in flood disaster management by identifying various factors that affect the effectiveness of emergency response.

Methods

The method used in this article is a literature review where analysis is carried out from various literature sources. The literature search was conducted through Google Scholar and ResearchGate sources with a range of years between 2019-2023. The keywords used in the literature search were preparedness; medical personnel response; and flooding.

Results and Discussion

Preparedness is an activity that shows the effectiveness of the response to a disaster. Preparedness strategies in disaster management are very important efforts to be made. As health workers and first responders and service providers in disaster emergency response are required to have higher disaster preparedness than other teams. The ability of health workers in disaster preparedness must be supported by a good knowledge base and attitude in disaster management.¹

According to Fadilla, et al (2022) there is a relationship between the role of health workers and preparedness in facing flood disasters. The implementation of disaster preparedness is not only the responsibility of the government, but also involves community participation, especially health workers. As one of the key elements in disaster response, health workers have a very significant role. Human resources (HR) or health workers in health services during a disaster event really need to pay attention to the disaster management competencies of local health human resources. The role of health workers is needed to minimize losses due to disasters that occur and are needed in disaster management. At the time of a disaster, it is necessary to mobilize health workers regularly so that there is no HR crisis.³

Research conducted by Hadi, et al (2019) showed that the preparedness and response of medical personnel in dealing with flood disasters is a crucial component to ensure fast, appropriate and effective treatment. Medical personnel, especially nurses, have an important role as part of the emergency response team, which is tasked with providing immediate care, reducing mortality, and preventing the spread of post-flood diseases. Medical personnel preparedness involves regular training, readiness of health facilities, as well as the ability to coordinate with various related agencies. Research shows that continuous training is necessary for medical personnel to have adequate skills to handle emergency situations. In addition, the readiness of health facilities, including medical equipment and medicines, is also an important factor in preparedness.⁴

According to Hendrawati, et al (2023) the response of medical personnel during a flood disaster is a key element in handling victims. A quick and organized response can reduce the risk of death and prevent more serious health complications. In practice, the response of medical personnel includes evacuating victims, handling injuries, providing first aid, and monitoring the health conditions of affected communities. Medical personnel must be able to adapt to field conditions that often change, including facing difficult access to affected areas. Geographical constraints and damaged infrastructure are challenges for medical teams in reaching disaster sites. Therefore, field navigation skills and the ability to work under pressure are essential.⁵

In a study conducted by Setiawati, et al (2020), the effectiveness of disaster response is highly dependent on good coordination between institutions, including the government, BNPB, non- government organizations, and local communities. However, this coordination is often hampered by bureaucratic constraints and communication problems in the field. In addition, medical personnel are faced with challenges such as limited resources, difficult access to affected areas, and high health risks due to poor sanitation conditions and polluted water. These conditions further exacerbate the spread of diseases such as diarrhea, leptospirosis and skin infections.⁸

Syahputra, et al (2023) explain that post-disaster disease prevention is an important focus in the medical response, given that an unhealthy environment after flooding can trigger disease outbreaks. Medical personnel play a role in educating the community about the importance of environmental hygiene, access to clean water, and measures to prevent infectious diseases. To meet these challenges, adequate knowledge of post-disaster health management is required. Capacity building of medical personnel through continuous training and provision of adequate resources, coupled with government policy support, is essential to ensure optimal preparedness and response in the face of flood disasters.⁹

Conclusion

Medical personnel preparedness and response is a crucial component in flood disaster management. Medical personnel, especially nurses, have a central role as first responders in providing emergency care, reducing mortality, and preventing the spread of diseases that often emerge post-disaster. Optimal preparedness involves continuous training, readiness of health facilities, and strong coordination with various related agencies. However, challenges on the ground such as limited resources, difficult access, and high health risks hinder the effectiveness of the response. Therefore, strengthening the capacity of medical personnel, improving coordination across sectors, as well as policy support from the government are needed. With a comprehensive approach, medical personnel can provide more effective services in dealing with flood disasters, so that the health impacts can be minimized.

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