

Preparedness, Management, and Emergency Response of Rural Health Workers

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Abstract— *The study primarily aimed to assess the emergency response of the Municipal Health Workers under the Ungkaya Pukan Municipality, Basilan Province, Philippines. The findings shows that level of emergency response as perceived by the Rural Health workers in Ungkaya Pukan is on Moderate Level. It is recommended that the Municipal Health Office (MHO) should initiate training on emergency response that will provide the basic knowledge and skills of all Rural Health Workers throughout the municipal. The findings revealed that instructional engagement in elementary school is high. This high level of engagement of teachers on instruction provides a primary basis for the division office to engage in other aspects rather than focusing on instruction.*

Keywords— *Emergency Response, Preparedness, Management, Response, Health Workers, Isabela City, Basilan Province.*

I. INTRODUCTION

Rural Health Units (RHUs) now play a larger role in ensuring that all health-related services and initiatives are carried out effectively and affordably. Therefore, it is crucial to develop well-thought-out plans and strategies for the prevention and development of diseases and the loss of life, as well as to lead the way in providing healthcare during and after emergencies or disasters, regardless of whether they were brought on by human activity or natural forces [3].

The demands placed on local response agencies and healthcare facilities during emergencies in rural communities, particularly during disasters that are severe or prolonged, can quickly deplete the available resources. In instances where the emergency lasts for a long time, this is especially true. Disasters can occur suddenly and without warning, whether they are the result of natural forces or human activity. They can also have far-reaching effects [10].

Rural communities have a better chance of successfully coping with large-scale emergencies if they plan ahead and become ready for them. This will allow for a good emergency response and effective emergency recovery. Rural individuals, towns, local governments, and others involved in catastrophe preparedness and response, however, face a number of challenges.

Some of these were highlighted by the Rural Health Information Hub in 2022 to include the challenges posed by resources, such as the availability of equipment and supplies, personnel, and infrastructure, as well as access to higher levels of medical care within the healthcare system [4].

Moreover, a dispersed population, proximity and location concerns [6], as well as communication problems, may pose obstacles to the provision of healthcare services. More so,

support from nearby medical facilities, local public health departments, law enforcement, and emergency medical services is necessary for rural communities to be able to prepare for and respond to emergencies. Several rural areas lack municipal public health departments, therefore these communities must rely on the state's public health authorities [7].

Similar to this, many Rural Health Units ostensibly deal with unique sets of financial difficulties and resource limitations. They might therefore be unable to appropriately respond to unanticipated emergencies, leaving communities exposed. In light of this, rural inhabitants may decide to adopt a whole-community approach to emergency preparedness and may choose to assign tasks and obligations to community members depending on their knowledge, capability, and talents [2]. This underlines the critical need to safeguard the protection and promotion of every Filipino's right to health and to equip RHUs with good and effective management and emergency measures in order to achieve a successful recovery.

The Philippines is the third most vulnerable country to natural disasters, according to the 2018 World Risk Report. Almost 80% of earthquakes take place within the Pacific Ring of Fire. Twenty to twenty-five typhoons per year wreak havoc on the nation, costing millions of dollars in infrastructural damage and taking lives. Of the roughly 220 identified volcanoes in the nation, at least 22 are thought to be active. The Philippines is one of the country's most vulnerable to the effects of climate change. The drought brought on by the El Nino Southern Oscillation has gotten worse during the previous few decades .

Similar to how the wet season is getting wetter, the dry season is getting warmer [5]. The nation's coastal regions are in peril due to rising sea levels. Another factor that has made the issue worse is the willful destruction of the environment. The Philippines is one of those countries where disasters are unavoidable, making the health sectors' primary tasks imperative.

Due to the COVID-19 pandemic's eruption, 3,704,407 Filipinos have been threatened with and affected by it, with 60,555 verified deaths [4]. In terms of confirmed cases and fatalities over the previous two years, the nation maintained its second-place ASEAN ranking. This happened in spite of extensive steps to stop the disease's spread, including a statewide lockdown, community quarantine protocols, stringent social seclusion, and disease information programs [8]. Having said that, it is true that healthcare professionals play a crucial role in preparing the community for calamity.

Being ready is the only method for RHUs to reduce the damage brought on by such events because it is assumed that disasters are unpredictable. Even while there is no way to entirely eradicate them, there are things that may be taken to decrease the impact of crises when they do occur. The responsibilities, preparation, and management of a medical team, including nurses working for a Rural Health Unit, are considered vital in this regard. So, the easiest way to lessen the effects of a catastrophic occurrence is to be ready for any emergency.

Public healthcare providers provide particular skills in times of emergency [3]. They not only act as first responders in some situations, but they also have the necessary knowledge and abilities to establish complete plans and policies, as well as to plan, carry out, and assess disaster response drills, exercises, and trainings. Whether in the field, where they offer first-line disaster health and crucial public health services, and in disaster operations and command centers, where they act in leadership and administrative roles, public healthcare providers are critical team members.

A disaster is particularly defined as an occurrence that presents sudden, serious, and urgent risks to the public's health. According to Al-Jazairi [1] and the World Health Organization [11], a catastrophe is any incident that results in enough harm, disruption of the economy, fatalities, and deterioration of health services to warrant an extraordinary reaction from beyond the affected community area. Emergency response, on the other hand, describes the actions taken in the wake of a crisis or a natural disaster to help lessen some of the negative effects. The nurses' responsibilities during this period include managing first responders and volunteers, arranging emergency communications, and giving emergency medical care to the injured.

The aforementioned discussion motivates the researchers to look into the disaster preparedness, management, and reaction of RHU employees of the Municipality of Ungkaya Pukan.

II. STATEMENT OF THE PROBLEM

This study aimed to assessed the level of emergency response of the Rural Health Unit workers of the Ungkaya Pukan Municipality, Basilan.

III. METHODOLOGY

The quantitative descriptive research design was used in this study. The respondents include the main employees of the Rural Health Unit of the Ungkaya Pukan Municipality and the ancillary service providers and volunteers. The subject of the study are the 28 Rural Health workers to include the regular, contractual and volunteers who belong to the healthcare provider system of the Municipality of Ungkaya Pukan and the twelve (12) barangay health centers. These RHUs workers are the municipal health officer, nurse, midwife, medical technologist, sanitary inspector, dentist, laboratory technician, administrative aide, Nurse Deployment Project (NDP), Rural Health Midwives Placement Program (RHMPP) and barangay Health Center volunteers. The study used a survey questionnaire that adopts from extracted study from Magnaye,

Lindsay, Muñoz, & Muñoz (2011), particularly on the disaster preparedness and management. A five-point Likert Scale was used as follows: 5 – Strongly Agree; 4 – Agree; 3 – Undecided; 2 – Disagree; and 1 – Strongly Disagree. The questionnaire checklist used shall be analyzed using the scale of measurement

TABLE 1. Disaster Preparedness, Management and Emergency Response Scale of Measurement

Score Range	Qualitative Description
4.50-5.00	Very High Level
3.50-4.49	High Level
2.50-3.49	Moderate Level
1.50-2.49	Low Level
1.00-1.49	Very Low-Level

IV. FINDINGS AND DISCUSSIONS

The data will be presented and discussed in this section. The data presented was analyzed and showed in tabular form. The data will be presented according to the thematic sequence on the areas of emergency response.

A. Preparedness

The following table shows the mean level of emergency response of the respondents under the area of preparedness.

TABLE 2. Mean level of emergency response of the respondents in terms of preparedness

Preparedness	Mean	Qualitative Description
1. I use the basic and continuing education to improve understanding of the need for competency in emergency response.	2.73	Moderate
2. I am prepared with competency training to respond in a critical system of scenarios.	2.94	Moderate
3. I have balance knowledge on emergency response in contrast with the signs, symptoms and clinical management of the injuries and illnesses caused by specific agents of disasters.	3.05	Moderate
4. I have practical experience in providing care to a small- or large-scale disaster and use this experience to facilitate care to patients.	3.10	Moderate
5. I believe that all healthcare workers will be first responders and they are prepared to recognize what actions should be helpful in stages of response.	3.28	Moderate
6. I believe that my institution develops a better preparation for emergency to improve coordination between public health and hospital-based sectors.	4.73	Very High
7. I am educated enough to have knowledge and skill related to mass casualty events.	4.26	High
8. I must stress the importance of being mentally prepared and having deep reserves of empathy for people who are much affected by the catastrophe.	4.10	High
9. I can prepare and learn together with others resulting in smoother team performance.	4.10	High
10. I believe that there is a full of emergency preparedness in some institutions and instances where healthcare workers are involved.	3.28	Moderate
Average	3.56	Highly

The data shows that the level of emergency response under the area of Preparedness of the Rural Health workers were ‘high’ with mean level of 3.56. Particularly, the Rural Health Workers have ‘Very High Level’ on indicator 6, ‘High Level’ on indicators 7, 8, and 9, and ‘Moderate Level’ on indicators 1, 2, 3, 4, 5, and 10. Indicators were ranked from highest to lowest mean level as follows:

- Indicator 6: I believe that my institution develops a better preparation for emergency to improve coordination between public health and hospital-based sectors.
- Indicator 7: I am educated enough to have knowledge and skill related to mass casualty events.
- Indicator 8: I must stress the importance of being mentally prepared and having deep reserves of empathy for people who are much affected by the catastrophe.
- Indicator 9: I can prepare and learn together with others resulting in smoother team performance.
- Indicator 5: I believe that all healthcare workers will be first responders and they are prepared to recognize what actions should be helpful in stages of response.
- Indicator 10: I believe that there is a full of emergency preparedness in some institutions and instances where healthcare workers are involved.

- Indicator 4: I have practical experience in providing care to a small- or large-scale disaster and use this experience to facilitate care to patients.
- Indicator 3: I have balance knowledge on emergency response in contrast with the signs, symptoms and clinical management of the injuries and illnesses caused by specific agents of disasters.
- Indicator 2: I am prepared with competency training to respond in a critical system of scenarios.
- Indicator 1: I use the basic and continuing education to improve understanding of the need for competency in emergency response.

This implies that the Rural Health Workers believes that Municipal Health Office have a better preparation for emergency to improve coordination between public health and hospital-based sectors but lacking on the basic and continuing education programs to improve understanding the needs for competency in emergency response.

B. Management

The following table shows the mean level of emergency response of the Rural Health Workers under the area of Management.

TABLE 3. Mean level of emergency response of the respondents in terms of management

Management	Mean	Qualitative Description
11. All sectors of health care, including myself and other responders are required to utilize incident management.	4.10	High
12. I develop mechanisms to increase rush capacity capability, noting that healthcare workers are the largest group professionals during disaster.	3.89	High
13. I consider that the government resources are fully apportioned to each patient and think of resourcing out.	2.10	Low
14. I believe that in handling of emergency situations, especially in case of mental health patients who are prone to violence requires the expertise of a disaster management team.	3.10	Moderate
15. Cultural competence must become part of disaster management to every community because not all times, there will be outsiders arriving to help.	3.15	Moderate
16. In my institution, there is a knowledge full in health care since the assessment of the patient and where they are coming from are not fully understood.	3.07	Moderate
17. When catastrophe strikes, I work systematically to ensure that no one is abandoned, especially in access of isolated areas.	3.13	Moderate
18. I identify the signs and symptoms of traumatic injury or incident when responding to disasters.	2.10	Low
19. I remain calmed even the situation is difficult to handle.	4.10	High
20. I have knowledge in the management of disaster	4.57	Very High
Average	3.33	Moderate

The data shows that the level of emergency response under the area of Management of the Rural Health workers were ‘moderate’ with mean level of 3.33. Particularly, the Rural Health Workers have ‘High Level’ on indicators 1, 2, 9, and 10, ‘Moderate Level’ on indicators 4, 5, 6, and 7, and ‘Low Level’ on indicators 3 and 8. Indicators were ranked from highest to lowest mean level as follows:

- Indicator 10: I have knowledge in the management of disaster.
- Indicator 1: All sectors of health care, including myself and other responders are required to utilize incident management.
- Indicator 9: I remain calmed even the situation is difficult to handle.

- Indicator 2: I develop mechanisms to increase rush capacity capability, noting that healthcare workers are the largest group professionals during disaster.
- Indicator 5: Cultural competence must become part of disaster management to every community because not all times, there will be outsiders arriving to help.
- Indicator 7: When catastrophe strikes, I work systematically to ensure that no one is abandoned, especially in access of isolated areas.
- Indicator 4: I believe that in handling of emergency situations, especially in case of mental health patients who are prone to violence requires the expertise of a disaster management team.
- Indicator 6: In my institution, there is a knowledge full in health care since the assessment of the patient

and where they are coming from are not fully understood.

Indicator 3: I consider that the government resources are fully apportioned to each patient and think of resourcing out.

Indicator 8: I identify the signs and symptoms of traumatic injury or incident when responding to disasters.

This implies that the Rural Health Workers have better knowledge in the management of disaster but needs training for identifying signs and symptoms of traumatic injury or incident when responding to disasters.

C. Response

The following table shows the mean level of emergency response of the Rural Health Workers under the area of Response.

TABLE 4. Mean level of emergency response of the respondents in terms of response

Response	Mean	Qualitative Description
1. I can balance compassion with professionalism, while arranging appropriate care and identifying symptoms and problems in times of emergency.	3.07	Moderate
2. I perform the receiving and caring of the victims based on my level of knowledge and my capacity to perform.	3.21	Moderate
3. I am able to continue to be a key player in local and national level emergency response.	3.31	Moderate
4. I take responsibilities on prevention, surveillance and emergency response during disasters.	3.13	Moderate
5. I am aware that establishing contacts, notifying the employees, and cooperation with other agencies is vital during emergency response.	3.31	Moderate
6. I can perform rescue and evaluate the injury of the victims and provide the first aid during a disaster.	3.23	Moderate
7. I am totally equipped with confidence and knowledge on the response team and works to integrate efforts into the team.	3.33	Moderate
8. I am able to respond timely to emergency situations and assure to open communication to patients, families and other medical professionals in order to provide accurate medical therapeutic intervention.	3.34	Moderate
9. I act to diverse tasks with professionalism, efficiency and above all-caring during emergency response.	3.26	Moderate
10. I can facilitate and perform the reconstruction and recovery process after the disaster.	3.23	Moderate
Average	3.24	Moderate

The data shows that the level of emergency response under the area of Response of the Rural Health workers were 'Moderate' with mean level of 3.24. Particularly, the Rural Health Workers have 'Moderate Level' on all indicators and these were ranked from highest to lowest mean level as follows:

Indicator 8: I am able to respond timely to emergency situations and assure to open communication to patients, families and other medical professionals in order to provide accurate medical therapeutic intervention.

Indicator 7: I am totally equipped with confidence and knowledge on the response team and works to integrate efforts into the team.

Indicator 3: I am able to continue to be a key player in local and national level emergency response.

Indicator 5: I am aware that establishing contacts, notifying the employees, and cooperation with other agencies is vital during emergency response.

Indicator 9: I act to diverse tasks with professionalism, efficiency and above all-caring during emergency response.

Indicator 6: I can perform rescue and evaluate the injury of the victims and provide the first aid during a disaster.

Indicator 10: I can facilitate and perform the reconstruction and recovery process after the disaster.

Indicator 2: I perform the receiving and caring of the victims based on my level of knowledge and my capacity to perform.

Indicator 4: I take responsibilities on prevention, surveillance and emergency response during disasters.

Indicator 1: I can balance compassion with professionalism, while arranging appropriate care and identifying symptoms and problems in times of emergency.

This implies that the Rural Health Workers perceived higher that the MHO respond timely to emergency situation and assure to open communication to patients, families and other medical professionals in order to provide accurate medical therapeutic intervention. They perceived lower on balancing compassion with professionalism, while arranging appropriate care and identifying symptoms and problems in times of emergency.

The following table shows the overall mean level of emergency response of the Rural Health Workers in all areas.

TABLE 5. Overall Mean level of emergency response of the respondents

Emergency Response	Mean	Standard Deviation	Qualitative Description	Rank
Preparedness	3.56	0.127	Moderate	1
Management	3.33	0.123	Moderate	2
Response	3.24	0.680	Moderate	3
Overall	3.38	0.240	Moderate	

Overall, table above shows that the mean level of emergency response of the Rural Health Worker is 3.38 and descriptively equivalent to 'Moderate Level'. Moreover, in all areas of the emergency response, the Rural Health Worker were all Moderate Level. Even though the respondents are undecided in all areas but the level varies on which the Rural Health Workers believe that they are more prepared for any emergency. Moreover, the Rural Health Workers have low perception about their response for emergency and management is just enough which is lower than the preparedness but higher than the response.

V. CONCLUSIONS

The findings shows that level of emergency response as perceived by the Rural Health workers in Ungkaya Pukan is on Moderate Level.

VI. RECOMMENDATIONS

The moderate level response of the Rural Health Workers in Ungkaya Pukan Municipality implies unawareness or non-existence of a good emergency preparedness and management of the Municipal Health Office (MHO). It is recommended that the MHO should initiate training on emergency response that will provide the basic knowledge and skills of all Rural Health Workers throughout the municipal.

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