

# The Importance of Prehospital and Disaster Medicine in Rural Areas in the Philippines

Jeff Clyde G. Corpuz, PhD 

Department of Theology and Religious Education, De La Salle University, Manila, Philippines

## Correspondence:

Jeff Clyde G. Corpuz, PhD  
Department of Theology and Religious Education  
De La Salle University, Manila 1004, Philippines  
E-mail: [jeff.corpuz@dlsu.edu.ph](mailto:jeff.corpuz@dlsu.edu.ph)

**Conflicts of interest/funding:** No funding was received for this paper. The author declares no conflict of interest in this paper.

**Keywords:** disaster response; prehospital and disaster medicine; Philippines

## Abbreviation:

COVID-19: coronavirus disease 2019

**Received:** August 28, 2023

**Accepted:** September 28, 2023

doi:[10.1017/S1049023X23006520](https://doi.org/10.1017/S1049023X23006520)

© The Author(s), 2023. Published by Cambridge University Press on behalf of the World Association for Disaster and Emergency Medicine.

Corpuz JCG. The importance of prehospital and disaster medicine in rural areas in the Philippines. *Prehosp Disaster Med.* 2023;38(6):820–821.

In the last two decades, disasters claimed the lives of an estimated 1.2 million people around the world. In 2022 alone, it is estimated that there have been 16 to 18.2 million deaths related to coronavirus disease 2019 (COVID-19).<sup>1</sup> A recent article review provides an overview of prehospital emergency care in low- and middle-income countries (LMICs).<sup>2</sup> The review examines the current state of prehospital care systems in these countries, highlighting challenges and areas for improvement. It emphasizes the need for enhanced infrastructure, trained personnel, and effective protocols to ensure timely and effective emergency medical response in resource-limited settings.<sup>2</sup> This paper adds to the discussion on the importance of prehospital and disaster medicine in rural areas in the Philippines.

Prehospital and disaster medicine play a pivotal role in the Philippines due to its geographical location, susceptibility to natural disasters, and the need for efficient health care response in emergency situations. The Philippines, an archipelago situated in the “Pacific Ring of Fire,” is prone to a multitude of natural disasters, including typhoons, earthquakes, volcanic eruptions, and floods.<sup>3</sup> The frequency and intensity of human and man-made calamities emphasize the critical importance of an effective prehospital and disaster medicine system. Timely and well-coordinated medical response can significantly reduce morbidity and mortality rates, provide efficient patient care, and bolster community resilience during and after disasters like the COVID-19 pandemic.<sup>4</sup> The unique geographical landscape of the Philippines poses significant challenges to health care delivery during disasters.<sup>3</sup> The scattered nature of islands, mountainous terrain, and limited road infrastructure in rural areas hinder rapid access to medical facilities. These challenges magnify the importance of prehospital care, where trained professionals can provide initial treatment at the disaster site or during transport to health care facilities.

The Philippines is among the world’s most disaster-prone countries, experiencing an average of 20 typhoons annually, along with earthquakes, volcanic eruptions, and landslides.<sup>3</sup> These events disrupt health care services, strain medical resources, and leave populations vulnerable to injuries, diseases, and psychological trauma. Prehospital and disaster medicine ensures a timely and organized response to these crises, minimizing the adverse health effects on affected populations. The media frequently highlights the immediate impacts of typhoons and their aftermath, such as destruction, injuries, fatalities, and economic damage. Nevertheless, it is important to recognize that typhoons and hurricanes also carry less obvious but significant long-term health consequences.<sup>5</sup> There is a need for targeted health education as a response strategy to disasters in low-income settings, and it is important that strategies are contextually relevant.<sup>6</sup>

Rural areas constitute a significant portion of the Philippines’ landscape, characterized by geographical isolation, limited health care infrastructure, and increased vulnerability to natural disasters. The combination of these factors underscores the need for a robust prehospital and disaster medicine framework tailored to the unique challenges faced by rural communities.<sup>1</sup> Disaster preparedness at the rural level (*barangay* to municipality level), therefore, remains a valuable area for development to mitigate the effects of humanitarian crises. Rural communities often grapple with limited access to medical facilities due to the remote nature of their locations. The scarcity of health care facilities and trained medical personnel exacerbates the impact of emergencies, making prehospital care a crucial link between initial medical response and specialized treatment centers.<sup>3</sup> Additionally, rural areas are not immune to the Philippines’ frequent natural disasters. Typhoons, landslides, earthquakes, and floods can cause devastating consequences in these regions. Developing disaster-resilient communities hinges on equipping rural

residents with the knowledge, skills, and resources needed to respond effectively in emergencies, further emphasizing the role of prehospital and disaster medicine.<sup>3</sup>

An effective prehospital and disaster medicine system requires a strong health care infrastructure that encompasses well-trained medical personnel, well-equipped medical facilities, and efficient communication networks. Training health care professionals in disaster response protocols and equipping medical facilities to handle surge capacities are essential components of disaster preparedness in rural areas. Efforts to enhance prehospital and disaster medicine in rural areas should involve targeted training programs for local residents and health care providers. Basic first aid, evacuation procedures, and medical triage training can empower individuals to provide immediate assistance to the injured before professional medical help arrives. These training initiatives can capitalize on the strong sense of community prevalent in rural settings.<sup>8</sup>

Prehospital and disaster medicine not only focus on immediate medical response but also contributes to building community resilience. Advancements in telemedicine and communication technology offer promising solutions for bridging the health care gap in rural areas. Telemedicine enables remote consultations with medical experts, aiding local health care providers in making informed decisions.<sup>1</sup> Additionally, mobile apps and messaging platforms can facilitate real-time communication during

disasters, enabling coordinated responses and resource allocation. Community-based initiatives can involve local leaders, schools, and grassroots communities in developing disaster plans, conducting drills, and disseminating information about emergency response protocols.<sup>7</sup> Investing in rural health care infrastructure is essential for effective prehospital and disaster medicine. Establishing well-equipped community health centers, strategically located evacuation centers, and accessible communication networks can significantly improve response times and ensure prompt medical attention during emergencies. Lastly, a multisectoral collaboration between government agencies, non-governmental organizations, and private sector entities is pivotal for the success of prehospital and disaster medicine in rural areas.<sup>9</sup> Partnerships can leverage expertise, resources, and funding to enhance health care delivery and disaster preparedness in these under-served regions.<sup>9</sup>

In conclusion, the significance of prehospital and disaster medicine cannot be overstated in a disaster-prone nation like the Philippines. Effective prehospital care, robust disaster response plans, and a resilient health care infrastructure are essential to mitigate the impact of disasters, to save lives, and to protect the well-being of communities. Through a combination of training, technology, community engagement, and collaboration, rural areas can strengthen their health care infrastructure and reduce vulnerability, forging a path towards a safer and more resilient future.

#### References

1. Stratton SJ. The COVID-19 pandemic: successes and failures in prevention and response. *Prehosp Disaster Med.* 2023;38(4):427–429.
2. Bhattarai HK, Bhusal S, Barone-Adesi F, Hubloue I. Prehospital emergency care in low- and middle-income countries: a systematic review. *Prehosp Disaster Med.* 2023;38(4):495–512.
3. Corpuz JC. Disaster response during super typhoons in the Philippines. *Prehosp Disaster Med.* 2023;38(1):135–136.
4. Corpuz JCG. Disaster management during war and COVID-19: humanitarian and prehospital interventions. *Prehosp Disaster Med.* 2022;37(4):566–567.
5. Chan EY, Liu S, Hung KK. Typhoon Haiyan and beyond. *Lancet.* 2013;382(9908):1873.
6. Lau LL, Hung N, Go DJ, et al. Knowledge, attitudes, and practices of COVID-19 among income-poor households in the Philippines: a cross-sectional study. *J Glob Health.* 2020;10(1):011007.
7. Murray R, Cristobal F, Shrestha S, et al. COVID-19 fosters social accountability in medical education. *Rural Remote Health.* 2022;22(2):6998.
8. Corpuz JCG. Inequalities and inequities during the pandemic: rich nations must also care for the poor. *Asia Pac J Public Health.* 2022;34(2-3):320–321.
9. Corpuz JCG. Multisectoral Approach on COVID-19 vaccination: a proposed solution on vaccine hesitancy. *J Public Health (Oxf).* 2021;43(2):e370–e371.