

The need for enhanced disaster preparedness in emergency medicine

Muhammad Anees¹, Muhammad Shah Mureed Ojla², Mahad Mirza Baig³

Karachi, Pakistan's largest city, is highly vulnerable to disasters, including earthquakes, floods, industrial accidents, and terrorist attacks. Unfortunately, the city's healthcare system, particularly its emergency departments (EDs), are not well-prepared to manage mass casualty events. In light of these risks, there is an urgent need to strengthen disaster preparedness within Karachi's emergency medicine infrastructure.

A major challenge is the absence of a comprehensive disaster management plan across hospitals in the city. While some hospitals have developed internal protocols, there is no standardised citywide approach that integrates hospitals, emergency medical services (EMS), and government agencies. Those plans which do exist are often unimplemented. This lack of coordination leads to delayed medical responses and inefficient use of critical resources during large-scale emergencies.¹

Moreover, most EDs in Karachi are not equipped to handle mass casualty incidents. Limited space, a shortage of critical care equipment, and insufficient medical supplies leave hospitals unprepared in times of disaster. For instance, during the 2015 heatwave, which resulted in over 1,200 deaths, hospitals were overwhelmed and unable to manage the influx of patients.² Without increased investment in ED capacity and disaster-specific resources, the city's hospitals will remain vulnerable to future crises.

.....
¹Medical Emergency Response Center (MERC) Quetta, Pakistan. ^{2,3}Dow International Medical College, Karachi, Pakistan.

Correspondence: Muhammad Anees. **Email:** aneesnasar042@gmail.com

ORCID ID: 0009-0007-9950-4039

.....
Submission complete: 12-11-2025 **First Revision received:** 12-01-2026

Acceptance: 11-02-2026

Last Revision received: 10-02-2026

Another critical issue is the lack of specialized training in disaster medicine for healthcare providers. While emergency care training is part of the curriculum for many professionals, few receive focussed instruction in disaster response, triage for mass casualties, or managing the unique challenges posed by disasters.³ This training gap leaves healthcare workers unprepared to respond effectively during large-scale emergencies, resulting in preventable loss of life.

To address these concerns, Karachi's healthcare system must adopt a unified disaster preparedness strategy that integrates EMS, EDs, and government agencies. Additionally, resources should be allocated to expand ED capacity, and disaster-specific training should be prioritised for healthcare workers. These measures will significantly improve the city's ability to respond to disasters and protect lives.

DOI: <https://doi.org/10.47391/JPMA.33624>

Disclaimer: None.

Conflict of Interest: None.

Source of Funding: None.

References

1. Malik M, Cruickshank H. Disaster management in Pakistan. *Proc Inst Civ Eng Munic Eng.* 2016; 169:85-99. Doi:10.1680/muen.15.00002
2. Babar MS, Tazyeen S, Khan H, Tsagkaris C, Essar MY, Ahmad S. Impact of climate change on health in Karachi, Pakistan. *J Clim Chang Health.* 2021; 2:100013. doi:10.1016/j.joclim.2021.100013
3. Saleem SG, Haider KF, Salman S, Samad L, Yasin Z, Rybarczyk M. Bridging the gap in emergency medicine in Pakistan. *West J Emerg Med.* 2020; 21:233-8. doi: 10.5811/westjem.2019.10.44502.

AUTHORS' CONTRIBUTIONS:

MA: Concept, design, data collection, drafting and final approval.

MSMO: Literature review, critical revision and data interpretation.

MMB: Data acquisition, proofreading and Final approval.