


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Letter to the Editor

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The powerful earthquake in Morocco came as a significant surprise, leaving geologists astonished, as it struck on the night of Friday, September 9, in the Al Haouz region, located southwest of the city of Marrakech. It was a 6.8 magnitude earthquake on the Richter scale that struck on September 8, 2023, at 11:11 PM local time (10:11 PM UTC) in the Al Haouz region in the Marrakech-Safi region of Morocco. The epicenter of the earthquake was located near the commune of Ighil, approximately 71.8 km southwest of Marrakech, at a depth of 18.5 km. According to the latest report published by the Moroccan Ministry of the Interior (September 12 at 1:00 PM), the earthquake caused the collapse, in whole or in part, of around 50 000 residential buildings. The earthquake has tragically claimed the lives of 2901 individuals and left 5530 others injured (including 1404 in a state of critical health).¹ The earthquake was the biggest and deadliest in contemporary Moroccan history since at least 1960, and it was the world's second deadliest in 2023, after the earthquakes in Turkey and Syria.

Numerous countries have extended their assistance and are actively contributing to relief efforts. Morocco is adhering to a “responsible, thorough, and efficient” approach in coordinating and managing offers of support from various nations, evaluating them based on the specific needs on the ground. Qatar, Spain, the United Arab Emirates, and the United Kingdom have demonstrated, alongside Moroccan relief teams, remarkable commitment in their efforts to assist the Kingdom of Morocco.

The Al Haouz earthquake provided a number of valuable lessons, particularly in the field of disaster preparedness and response. First and foremost, solid advance planning proved essential. Health facilities and hospitals must have well-designed emergency plans, including protocols for dealing with large numbers of victims and coordinating relief efforts with other stakeholders.

A key element is inter-institutional coordination, involving close collaboration between health facilities, local authorities, government agencies, and humanitarian organizations. A well-defined coordination mechanism and effective communication channels are essential to ensure a smooth, coordinated response.² The involvement of the local community can facilitate access to health care and the transition to the recovery phase. The regular training of medical staff and the conduct of disaster simulation exercises are essential to reinforce preparedness. In this context, the training of advanced practice nurses in emergency medicine will be central. In addition to ensuring effective coordination, these professionals are specifically trained to perform accurate and rapid triage in emergency situations.³ Their expertise contributes to a better allocation of resources, rapid patient care, and optimization of the overall response.

The recent earthquake not only underlined the need to reinforce road infrastructure, but also highlighted the difficulties of access for rescue teams due to the rugged terrain and the predominant use of clay and rock in building materials. These factors contributed to a higher human toll on site. The key to an effective emergency medical response is to deliver the right interventions when and where they are most needed. These observations underline the interconnection between infrastructure, timely medical responses, and disaster preparedness to mitigate the impact of such events.⁴ In addition, there is a clear requirement to promote awareness of disaster prevention, including earthquake responsiveness, the preparation of first-aid kits,⁵ and the establishment of efficient communication in high-risk areas. Adequate emergency planning at local and national levels is imperative to ensure swift and well-coordinated disaster response efforts.

Morocco faces a persistent threat from the ongoing movements along the northwestern boundary of the African plate and the Eurasian plate, owing to its geographical positioning⁶ a

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network of seismic and accelerograph stations has been established, currently totaling 35 stations. Integrating earthquake preparedness sessions into the school curriculum and increasing public awareness are particularly beneficial endeavors.

Moreover, there is a pressing need to train health care professionals in trauma and emergency medical management specific to earthquakes. It is essential to establish robust emergency communication systems to swiftly disseminate critical information to affected populations and responders during disasters. Additionally, the experience underscores the importance of international cooperation in disaster management, including humanitarian assistance and the coordination of relief efforts.⁷

After the crisis, a detailed evaluation is needed to examine successes and areas for improvement. These lessons must be incorporated into future emergency plans, as earthquake health management must be a process of continuous improvement.

To summarize, the management of health during an earthquake, such as the one in Al Haouz, requires meticulous planning, effective coordination, judicious allocation of resources, and ongoing preparation. The lessons learned are essential for strengthening the resilience of health care systems in the face of natural disasters, thus ensuring a better response to future crises.⁸

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