## Recent Twin Earthquakes in Iran: Was Volunteer Assistance Effective?

Reza Rikhtegar, MD;<sup>1,2</sup> Sina Zarrintan, MD;<sup>3</sup> Farzad Kakaei, MD<sup>3</sup>

- Department of Neurology, Imam Reza Hospital, Tabriz University of Medical Sciences, Tabriz, Iran
- Neuroscience Research Center, Tabriz University of Medical Sciences, Tabriz, Iran
- Department of General and Vascular Surgery, Imam Reza Hospital, Tabriz University of Medical Sciences, Tabriz, Iran

## Correspondence:

Sina Zarrintan, MD
Department of General Surgery
Golgahst St.
Imam Reza Hospital, Tabriz, 51664 Iran
E-mails: s.zarrintan@yahoo.com,
zarrintan@tbzmed.ac.ir

doi:10.1017/S1049023X13000277

The 2012 Iranian earthquakes took place in the cities of Ahar and Varzqan in East Azerbaijan province on August 11, 2012, at 4:53 PM Tehran time. Twin earthquakes (6.4 and 6.3 on the Richter scale) stuck northwest Iran 11 minutes apart. The earthquakes were strong enough to destroy more than 200 villages. Unfortunately, official buildings and medical centers were also destroyed.

Official rescue operations and volunteer assistance were initiated soon after the disastrous events. Although people were eager to assist their injured compatriots, volunteer rescue operations were not effective enough to save injured people. Many injured people were transferred to Tabriz, the capital city of Eastern Azerbaijan province to receive medical care.

Despite volunteers' activities, there were a number of flaws in people's collaborations. First, they did not have enough knowledge about the type of collaborations that could be effective. It seemed that people were unaware of proving purposeful assistance and managing the disaster. Second, a huge mass of people were eager to go to the earthquake region; this led to a traffic jam in the roads connecting the damaged cities. Consequently, official assistance resources were stuck in heavy lines of cars. Third, people were unable to recruit effective resources because of communication difficulties. For example, according to Ghabili et al,<sup>2</sup> telecommunications following the earthquakes were disrupted due to telephone network traffic overloading.

In response to experience from these disastrous events, educational plans should be established to further prepare people regarding probable future earthquakes. In addition, volunteers should be educated to provide the most efficient care to the most injured people.

## References

- 1. Golzari SE, Ghabili K. Twin earthquakes in northwest Iran. Lancet. 2012;380(9851):1384.
- Ghabili K, Golzari SE, Salehpour F, Khalili M. Lessons from the recent twin earthquakes in Iran. PLoS Curr. 2012;4. doi: 10.1371/currents.dis.ea574d0075a8e90a9cb782b368c60c36.