



Lessons Learned from the 2017 Kermanshah Earthquake Response

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Dear Editor,

On November 12, 2017, at 21:48 local time, an earthquake struck Azgaleh in Kermanshah province, Iran, with a magnitude of 7.3 on the Richter scale. In this event, around 4700000 people were exposed and the number of mortalities was 650. Around 8,000 people were injured, and 70,000 were displaced. Furthermore, 12,000 buildings were damaged. The highest mortalities were reported from Sar-e-Pol Zahab, Ghasr Shirin, and Salas Babajani (1). Earthquake is a natural disaster with the least possibility for being predicted. The immediate mortality following an earthquake is high. In fact, 71% and 80% of deaths are reported in a few minutes and the first six hours after an earthquake, respectively.

Disaster Medical Assistance Team (DMAT) comprises a group of medical and non-medical staff skilled in various activities. Their primary function is to deliver clinical care in the affected area. These individuals can perform their functions for up to 72 hours and can treat as high as 250 injured daily without any external aids (2). Following an earthquake, infrastructures and healthcare centers are largely devastated, leading to a shortage in health provider personnel. These events significantly hinder delivering health services to a large number of injured. In these situations, relief teams are expected to treat the wounded in the affected place. After the initial triage, the severely injured individuals are translocated to outside areas to seek medical aids from DMAT established at the circumference of the inflicted area. After being medically stable, the injured are transferred to distant hospitals (3).

Following the earthquake in Kermanshah province, the trustee rescue teams and non-governmental organizations (NGOs) were immediately deployed to the affected areas starting relief operations as soon as possible. As the

disaster happened at night time and the health infrastructures and lifelines of the region were devastated, and because of the power outage and the disruption of communicative systems, the relief operations encountered many difficulties. Some of the injured were treated in outpatient settings while others were transferred to hospitals in Kermanshah and neighboring provinces by Emergency Medical Services (EMS) and Helicopter Emergency Medical Services (HEMS). The transportation faced numerous problems such as traffic, overcrowding, damaged roads, mountainous regions, and unstable climate, delaying the transportation process. As an experience, it was learned that reaching relief teams to the affected area and the transportation of the injured to local hospitals to seek advanced medical care faced severe limitations due to destroyed health infrastructures and lifelines following the earthquake. The fast deployment of DMAT to the disaster zone can have the following advantages:

- Immediate treating and discharging of the outpatient injured in the affected area
- Delivering advanced medical services to the injured who are in a dire situation in the affected area and transporting them to regional hospitals after being stable
- Reducing the mortality rate following the earthquake
- Reducing the cost of relief and rescue
- Avoiding overcrowding of the injured in hospitals

Footnotes

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