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# DISASTER AND EMERGENCY

M E D I C I N E J O U R N A L

## The impact of a Disaster on an Emergency Department Distant from the epicenter: our emergency medicine practices

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## LETTER TO THE EDITOR

**The impact of a Disaster on an Emergency Department Distant from the epicenter: our emergency medicine practices**

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Dear Editor,

an earthquake is different from other disasters because it affects all living beings in the affected region and requires a multidisciplinary approach [1]. After major earthquakes, large populations migrate to other cities, accompanied by the transfer of injured individuals [2]. As a result of the two consecutive major earthquakes centered, the aftermath affected 11 cities and millions of people [3]. When examining past earthquake experiences, the most common issues encountered are related to identification, patient records, triage, and the proper planning of personnel and equipment [4]. Head, abdominal, and chest trauma are less frequently seen in emergency departments (ED), as they often lead to rapid mortality in the early hours after an earthquake. Consequently, extremity fractures, amputations, compartment syndrome, and rhabdomyolysis — become more prominent in ED [5]. In ED far from the disaster area, while trying to provide urgent medical care to disaster victims, you must also simultaneously attend to other patients arriving at the emergency department. The physical and psychological burden that this places on healthcare personnel is one of the most significant risk factors affecting the delivery of care. The most important source of motivation was their belief that they could provide more help to those being rescued from beneath the rubble.

In this report, we aimed to outline clinical practices used in managing the disaster's aftermath away from the earthquake's epicenter. Within the first 10 days, 2,716 patients presented to the adult ED, with 658 adults and 214 pediatric patients hospitalized. A total of 290 adults and 83 pediatric patients underwent surgery, while 31 adults and 6 children died. It was expected that a large number of patients with simultaneous multi-trauma and crush injuries would arrive, so we planned a rapid triage algorithm and personnel distribution. Exhausted staff were given mandatory rest, and a new shift schedule was created for everyone. In addition, sleep and nutritional needs were regularly monitored. The triage of both adult and pediatric patients was conducted by an experienced emergency medicine specialist. The most important factor that accelerated triage was our effective management of the 28 enclosed patient areas (level 3 critical care) in our critical care unit, where we could simultaneously provide healthcare services to a total of 56 patients. We assigned healthcare personnel, and all necessary medical devices for multi-trauma management to each room. Each healthcare worker received the patients within their designated room. The biggest issue for patients after triage was the lack of identification and medical records. To address this, we took facial photographs of all patients, assigned them a natural disaster diagnosis code, and registered each patient in the hospital information system with a unique identification code. Another team worked on recording and storing patients' personal belongings. After the medical evaluation was completed, only the radiology unit next to the critical care area was used for radiological imaging of these patients. Experienced emergency medicine specialists performed FAST ultrasound on the patients, allowing for quick decisions on the placement of central catheters or chest tubes as needed during the initial trauma assessment.

In conclusion, the management of both the primary destructive effects of the earthquake and the subsequent secondary health issues requires careful planning of limited personnel and medical supplies, as well as preparation for potential problems.

## **Article information and declarations**

### **Author contributions**

Conceptualization — ABE, ES; data curation — ABE; formal analysis — ABE, ES; methodology— ABE, writing, original draft — ABE; writing, review & editing — ABE, ES.

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#### **Conflict of interest**

None.

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