

attention. Recommendations to the respective authorities and the establishment of standards for the minimum levels required have become evident. Furthermore, the data obtained constitute a baseline for further studies on this and other related matters. Understanding the most important constraints impeding more sustainable development in health emergency preparedness also could be useful for other similar regions of the globe.

**Keywords:** archipelagos; Azores; emergency; health; islands; plans; preparedness

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### Medical Aspects of Mass Casualties Management—Lessons Learned from the Bam Earthquake

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**Introduction:** At 05:26 hours on 26 December 2003, an earthquake measuring 6.5 on the Richter scale struck the city of Bam and its surrounding villages. The earthquake, with a shallow focal depth (8 km), appears to have had its epicenter very close to Bam. In the affected area, most buildings were designed with extremely poor earthquake resistance. Although the impact of earthquake was limited to a small area (about 16 km in radius), the 2,500 year-old historic city of Bam was destroyed completely.

The earthquake affected approximately 200,000 people. A total of 30,000 persons were killed, 20,000 persons were injured, and 45,000 persons were left homeless.

The entire health infrastructure of the affected area sustained heavy damage (from 40–100%). None of the health facilities were functional, and local health workers were unavailable. The devastating earthquake placed a great burden of injured and traumatized patients on the provincial health system and hospitals in other areas (six cities). More than 12,000 injured patients were transported by air to other cities in the first 48 hours. For the first two days, there was no water or electricity in the town, and drinking water was provided in the form of bottled water. To cover the needs, the city of Bam was divided into 12 zones. Each zone was managed by a medical team deployed from medical universities in other provinces.

The Iranian Red Crescent Society medical teams were deployed to the scene immediately after the earthquake, and during a four-week period, treated thousands of casualties in a field hospital and several medical emergency units. Many other medical teams from around the world arrived in the area during the following days, and a huge, multi-national, multi-organizational medical and relief operation was done.

**Conclusion:** In this presentation, the following lessons learned from the disaster and its aftermath will be described: (1) general problems; (2) pitfalls and errors; (3) difficulties in performance; and (4) useful experiences.

The triage system, which is highly important in terms of disaster management, will be discussed, and recommendations for an effective triage system in earthquakes will be made. Also, the epidemiologic data of 13,720 casualties has been described, including: (1) day of admission; (2) dura-

tion of admission; (3) mean time under the rubble; (4) patient complications; and (5) mortality in hospitals.

This study is the result of data collected from 11 field hospitals, four basic health centers, and several medical units in the area.

**Keywords:** Bam; data; earthquake; hospital; Iranian Red Crescent Society; mass-casualty event; medical; triage

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### South Florida Regional Disaster Medical Assistance Team

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2004 was a year of unprecedented hurricane activity for the state of Florida, with four significant hurricanes striking its coastline. In August 2004, Hurricane Charley hit the west coast of Florida, causing severe damage in Punta Gorda and its surroundings. Immediately after the hurricane had passed through Punta Gorda, the National Disaster Medical System/Federal Emergency Medical Agency, both part of the United States Department of Homeland Security, activated a number of disaster medical assistance teams (DMATs) to augment local emergency medical services (EMS) providers.

The main points of the research were:

1. The South Florida DMAT (FL5) was deployed to Port Charlotte Regional Medical Center in Punta Gorda to establish a mobile field hospital in the parking lot outside the emergency department to provide advanced trauma life support (ATLS) and advanced cardiac life support (ACLS) stabilization, as well as prepare for primary and mental healthcare needs;
2. In a seven-day period, the FL5 treated >1,000 patients ranging in acuity from multiple stab wounds to cardiac and respiratory arrests to replacing lost medications and providing psycho-social care to the impacted community;
3. The type of patient encounters, treatment provided, and final disposition all were analyzed;
4. The logistical support and planning issues inherent in being able to respond to a variety of natural and man-made disasters at short notice and in an austere, clinical environment were discussed;
5. An overview of the extended clinical capabilities of the FL5, including administration of blood products and field radiology was given; and
6. The importance of the team pharmaceutical cache, and a review of pharmaceutical items utilized during the deployment were discussed.

**Keywords:** disaster; disaster medical assistance team (DMAT); Florida; management

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