

the type varied considerably. A number of emergency departments were prepared to send staff outside to manage patients (43%) or into the hot zone (11%). This did not correlate with the level of PPE or decontamination facility available.

**Conclusion:** Disaster preparedness has improved in Australian EDs over the past two years in some areas, most notably equipment availability for PPE and decontamination. However, there are concerns about the perceived or actual levels of preparedness of some emergency departments and the need for funded education and training.

**Keywords:** Australia; chemical, biological, and radiological (CBR); decontamination; disasters; education; emergency departments; personal protective equipment; preparedness; training

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### Role of Hospitals in Disasters

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Hospitals are depended upon to be a cornerstone of response to disaster, but many hospitals are not adequately prepared to respond effectively. This presentation will address the impact of disaster on hospitals, the evolving role of the health system in national security, and public expectations.

A discussion of current practices in hospital preparedness will examine why hospitals are vulnerable to disaster. Forces impacting hospital preparedness will be identified. The critical elements of a solid hospital preparedness program will be described along with chronic pitfalls in hospital preparedness.

The current state of the science in hospital preparedness for acute-onset disasters will be examined and gaps in current knowledge will be addressed.

The level of preparedness in dozens of hospitals in the United States and in other nations has been analyzed. A hospital preparedness program that was an award finalist in the 2004 Harvard University/Mitretek Innovations in American Government Homeland Security award was led by the authors.

**Keywords:** assessment; current practices; disasters; hospitals; preparedness

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### Resistance Factors to Rapid Response in Natural Disaster Scenarios

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**Introduction:** The frequency of natural disasters is increasing. Rapid response on a local, national, and sometimes, international scale is required to offset increasing levels of mortality and material loss. Many factors can frustrate or impede the rapid response of individuals and relief organizations. Each organization will encounter difficulties regarding rapid movement of personnel and appropriate equipment to a natural disaster zone. These may be specific to a particular organization, but common obstacles to rapid response exist as well. The hypothesis is that there will be common obstacles to rapid response encountered by

the various relief organizations. This study seeks to gauge the opinions of those engaged in response strategies to natural disasters, regarding these resistance factors. This study is qualitative in approach and attempts to establish a priority “hit list” which could serve as material for intervention and improvement for the disaster relief organizations.

**Methods:** A research tool (questionnaire) was constructed based on findings from extensive meetings and discussions with those engaged in disaster relief, together with observations from first-hand experiences in the emergency relief effort in El Salvador after the earthquakes of 2001. The questionnaire was circulated to members of the World Association for Disaster and Emergency Medicine (WADEM), other emergency relief agencies, and non-government organizations, after an appropriate pilot study using a random sample of WADEM members.

The circulation of the questionnaires and collation of material from the responses is ongoing, but the bulk of the responses were received during 2002–2003.

**Results:** Responses were received from four main sources—WADEM, Tear Fund (NGO), some United Nations departments, and Search and Rescue teams. The WADEM members from 17 countries completed the questionnaires. Fourteen of the 46 “resistance factors” to rapid response listed on the questionnaire were highlighted by each respondent consistently.

**Conclusions:** The attention to resistance factors to rapid response using the sampling tool yielded a positive response. A pattern of consensus has emerged which is worthy of further study. The magnitude of a given event versus the state of readiness and capacity of the local hospital services and defense organizations is a key issue. Disaster mitigation and preparedness is now high on the agenda regarding disaster response. It behoves all engaged in disaster response to examine the efficiency of their particular organization and the systems employed, and to ask the question: “Could improvements be made in the response time to a given event and could resistance factors to rapid response be overcome?”

**Keywords:** natural disasters; relief; response

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### Emergency Air Medical Services in Taiwan: Long Distance Aeromedical Evacuation of Patients From a Remote Island by a Chartered, Fixed-Wing Air Ambulance

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**Background:** There is an increasing demand for emergency air medical services (EAMS) in Taiwan. Geographic limitations, as well as physician shortages, on some outer islands of Taiwan have resulted in increased EAMS development on remote islands.