

Objective: The disaster medical responses to three earthquakes were assessed using the Utstein Template. The three earthquakes that had almost the same level of energy were: (1) The Great Hanshin (Kobe) Earthquake in 1995; (2) the West Tottori Earthquake in 2000 in Japan; and (3) the Chi-Chi Earthquake in 1999 in Taiwan.

Methods: The Gothenburg version of the Utstein Template was applied to the three earthquakes, especially focusing on the initial medical responses during the first days after the quakes.

Results: The scores for medical indicators, public health indicators, impact on the health care system, preparedness, and deficiency in response capacity are as follows

Site	Medical Indicators Score	Public Health Indicators Score	Impact on Healthcare System Score
Kobe	75	34	17
Tottori	6	2	8
Chi-Chi	48	17	6

Site	Preparedness Score	Response Capacity Deficiency Score
Kobe	48	41
Tottori	57	4
Chi-Chi	12	9

The overall average scores were 43.0 in Kobe, 15.4 in Tottori and 18.4 in Chi-Chi.

Conclusions: The immediate medical response to the disaster was the poorest in the Great Hanshin Earthquake in Kobe. Disaster preparedness was poorer in Japan than in Taiwan, with no obvious progress made in disaster preparedness in Japan since the Great Hanshin Quake. The Utstein Template is one of the best tools to be used as a "common language" for comparison of medical responses during disasters. Precise data collection, however, requires much time and effort, and bias by its analyst cannot be avoided. More concrete criteria for each indicator could increase the reliability of this scoring system and help more researchers use this Template.

Keywords: comparison; Chi-Chi; Kobe; earthquakes; severity scores; Utstein Template; Tottori

Prehosp Disast Med 2002;17(s2):s2-3.

Chemical-Biological-Radiological-Nuclear (CBRN) Analytical Framework Based upon the "Guidelines for Emergency Response in the Utstein Style," Developed by the World Association of Disaster and Emergency Medicine

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There is increased national concern regarding the potential use of weapons of mass destruction (WMD) or terrorist attacks using chemical, biological, radiological and nuclear (CBRN) hazards. Such "human-caused" events present a special challenge in disaster management in their unpredictability and potential for large-scale damage.

This paper proposes a conceptual framework that allows a rigorous approach to medical preparedness and response to CBRN events. The CBRN analytical framework, derived by applying CBRN analytical tools to the WADEM "Utstein Template and Guidelines (Health Disaster Management: Guidelines for Evaluation and Research in the Utstein Style: Executive Summary)", Task Force on Quality Control of Disaster Management), establishes an analytical relationship between a stated CBRN threat and the range of potential impacts posed by this threat. It addresses the importance of using a formal method with standardized terminology in order to "attenuate or eliminate the damage from a disaster."

An effective medical response will mitigate the damage (loss of life) from a disaster; the challenge for the emergency planner is to know – ahead of time – which type of medical response will be required by the actual event. The CBRN analytical framework allows one to define the scope of the required medical capabilities that will allow a comprehensive and integrated medical response to a broad range of possible CBRN events.

Further, this shift from a "threat" to a "capability-based" perspective allows the development of medical planning factors that estimate the maximum credible events, the damage from these events, and the requirements for medical treatment of these events. The CBRN analytical framework, its definitions and estimates, may serve as an adequate template for medical CBRN planning and response.

Keywords: chemical biological radiological and nuclear, disaster, Utstein template, weapons of mass destruction

Prehosp Disast Med 2002;17(s2):s3

The Use of Qualitative and Quantitative Methodologies for the Evaluation of Emergency Medicine in Post-conflict Serbia

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Objective: Due to the complexity of health system reform in the post-conflict/post-disaster setting, attempts to restructure health services are fraught with pitfalls that often are unanticipated because of inadequate preliminary assessments. A multi-modal assessment—involving quantitative and qualitative methodologies—may provide a more robust mechanism to identify key programmatic priorities and critical barriers for appropriate and sustainable