

Theme 3. Sharing Pacific Rim Experiences in Disasters

Chairs: Dr. Catherine Hickson & Dr. Michael Schull

A Comparative Study of Emergency Medical Response in Hanshin-Awaji and Taiwan Earthquake: Lessons Learned from Rapid Medical Response in Taiwan Earthquake

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We report the changes that have occurred in the system for emergency medical responses after the Hanshin-Awaji Earthquake, and what we have learned from the emergency medical response following the Taiwan earthquake. In the Hanshin-Awaji earthquake, 5 years ago, we learned many lessons and are going to construct a new system of disaster medical response in Japan. What we learned about the excellent activities of emergency medical response were practiced in Taiwan following the earthquake of last September. Because the damages to the local governmental offices were limited, the unification of incident command was practiced, and many patients with severe injuries were transported out of disaster regions. Large quantities of medical equipment were transported into the disaster regions by the army. Many medical teams from non-disaster areas also were dispatched rapidly, for Taiwanese have good sense of self-defense for preventing disaster.

We should make greater effort to construct a good system for the emergency medical response for the future disasters in Japan. It should include the rapid dispatch system for search and rescue teams with medical teams, a system for transporting the severely injured patients to the non-disaster areas through the core hospitals in disaster areas using helicopters, and the coordination of multiple agencies.

Keywords: earthquake; emergency medical responses; Hanshin-Awaji earthquake; Taiwan

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Urban Prehospital Emergency Medical Transportation in Taipei following the Taiwan Earthquake

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The Taiwan earthquake measuring 7.3 on the Richter scale, struck at 01:47 hours on 21 September 1999, and resulted in the deaths of >2,000 people. Taipei, the capital city of Taiwan and 200 kilometers from the epicenter, sustained collapse of only one building (12-story) like a pile of stacked pancakes, but it resulted in the highest death toll among all collapsed structures in the quake.

To characterize the management of urban, prehospital EMS transportation during a disaster, we surveyed the distribution of the patients by receiving hospitals and by the severity of the injured patients taken from this collapsed building. Seventy-six victims were dead upon extrication. All 138 patients who were extricated alive were distributed between seven surrounding general hospitals within a 15-minute distance for transportation. Among these, 74% (102/138) of patients were transported by EMS ambulance and 87% (89/102) were sent to the two most nearby hospitals within 5 minutes distance regardless their severity of injury. They arrived within 3 hours after the quake and resulted in overcrowded conditions in the two Emergency Departments. A diagram of the relation between the surrounding hospital distance, the number, and injury severity by distribution of the patients will be presented.

Transportation management of this confined space disaster in urban area was overlooked. Though the distribution of general hospitals is compact in this prosperous city, the incident command system should carefully manage the dispersal of patients transported by ambulance in a manner to avoid overcrowding problems in the surrounding Emergency Departments.

Keywords: confined-space medicine; distribution; earthquake; emergency department; emergency medical transportation; hospitals; prehospital; urban

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