5,200 first responders. These were village laypersons trained in basic life support techniques in 2-day courses. Their only equipment was five rolls of elastic bandages. Advanced trauma life support techniques were provided by 135 trained and well-equipped rural paramedics.

Results: The rural basic trauma system had a significant impact on trauma survival. The mortality rate dropped from a pre-intervention level of 40% to 8.8% during the study period (95% Confidence Interval (CI) for difference of 23%–39%). In 16 patients (1.5%), the paramedics used advanced techniques (airway intubations, chest tube placement, etc.); all other patients received basic support only. The outcomes of patients managed primarily by first responders (first-responder group) were compared with patients managed only by trained paramedics (paramedic group). The response time was significantly less for the first-responder group (0.9 hours) compared to the paramedic group (2.0 hours). The overall mortality rate was significantly lower in the first-responder group, 7% versus 19% (95% CI=8.2%–15.0%). Also, in major trauma victims, the mortality was lower in those treated by the first-responder group (47%) than those treated by paramedics alone, (70.2%) (95% CI=5.3%–40.5%).

Conclusion: In traumatic events with long evacuations in rural areas, the key to initial survival is doing simple things early. Time, not sophisticated procedures, is the critical factor. Contrary to this lesson, disaster rescue missions traditionally consist of high-tech interventions arriving late at the scene. This is well documented in a recent Iranian report on the Bam earthquake, where the first emergency team entered the scene at Bam 14 hours after the accident; only 12.6% of flight evacuations took place during the first 24 hours.[4] Rather than advanced and expensive external interventions, basic disaster preparedness should involve training the ABCs of trauma to thousands of lay persons inside the risk zones.

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Japanese Red Cross Medical Activity in Iranian Earthquake (2003–2004)

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A powerful earthquake struck the remote city of Bam located in the southeast area of Iran on 26 December 2003. It killed 26,271 people and injured approximately 40,000. The Japanese Red Cross Society dispatched a medical team composed of 15 staff (one team leader, four doctors, four nurses, three administrators, and three engineers). The medical activity of this basic healthcare emergency response unit (ERU) was begun on 31 December, and treated 1,163 patients during three weeks. The medical facility was designed to provide for minor surgeries, general medicine, and primary health care including psychological support. Fourteen percent of the problems were ailments closely related to the earthquake. Victims were crushed to death or were asphyxiated due to the thick and dense dust from the collapse. Both traumatic injuries and an upper respiratory infection constituted 10% of the total problems. No endemic diseases were identified.

As an emergency system for the earthquake-victims, Japanese basic healthcare ERU was deployed first in India 2001. In Iran, it also was effective in replenishing the function of the totally damaged local hospitals, especially during the initial stage of the disaster.

The clinical data of the patients will be presented, as will the medical activities of the Japanese Red Cross Society.

Prior Topic Knowledge and Post-Course Improvement in a Disaster Preparedness Course

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Introduction: In the last several years, there has been an increased interest in disaster preparedness and response. Based on this interest, a course in disaster preparedness was created for five countries in Southeast Asia: Bangladesh, India, Indonesia, Nepal, and the Philippines. The course initially was taught to the most experienced hospital and administration personnel in each respective country.

Objectives: To: (1) briefly describe the course; (2) assess prior knowledge aptitude with course topics; (3) determine country variability in regards to topic knowledge base; and (4) determine course content that needs to be targeted in future disaster preparedness course development.

Methods: A team of international experts developed a four-day course covering 30 topics and exercises. The course used an earthquake as the primary disaster. Participants, who were hospital administrators and senior hospital health officials, were surveyed pre- and post-course, regarding prior topic knowledge and post-course topic knowledge. Data were compiled and variability assessed on non-earthquake-related topics. To date, the course has been held in Indonesia, Nepal, and the Philippines.

Results: The improvement scores for all topics were at 1.21/5. The greatest areas of improved knowledge were in Hospital Emergency Incident Command Systems (HEICS) (1.6/5), and on-site facilities (1.5/5). Of all participants, the five lowest topic areas of pretest knowledge were HEICS, on-site medical facilities, hospital evacua-