sheltering in place activities. Mass-casualty incident (MCI) preparedness systems also are compared by discussing alert systems, patient routing to hospitals (from an MCI scene) and within hospitals (emergency department flow), staffing, triage, patient identification, tracking and discharge, volunteer tracking, and overall security systems adaptability and flexibility.
Methods: Researchers were hosted by Israeli emergency management experts and were provided with organizational overviews via slide presentations, extensive question-and-answer sessions, and tours of individual organizations. The comparative analysis was augmented by extensive literature reviews of the three national systems.
Conclusions: Adequate planning for sufficient security measures plays a vital role in healthcare mitigation planning as it applies toward MCIs. National systems can benefit from developing best practices that reflect a variety of approaches from differing international regions. While undeniable cultural and systematic differences are present among differing nations, the global healthcare security communities can benefit from developing best practices as an approach for security mitigation planning.
Keywords: emergency preparedness; healthcare; hospital; incident management; mass casualty incident; mitigation; prevention; regional; safe hospitals; security
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Risk Assessment for Healthcare Facilities: A Practical Tool

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Introduction: To be prepared to deal with emergencies, healthcare facilities must engage in a process with their community to determine specific risks and vulnerabilities. They also must prioritize planning activities to ensure that they are prepared for the highest risk events and the ones with the potential for greatest impact.
Methods: The emergency management, emergency medicine, and emergency response literature was systematically reviewed to identify models that have been proposed for assessment of hazards, risk and vulnerability in all settings. A model specific to healthcare settings was developed and pilot tested in an acute care hospital.
Results: No existing model was found in the literature that combines a quantifiable probability estimate and multiple components of impact for healthcare facilities into one formula. Also, no published models had been tested for usability or outcome. Using the concept of "risk = probability x impact", a probability rating was developed for healthcare facilities. Impact was defined along three key domains: (1) human impact; (2) property impact; and (3) business impact. Risk was defined as "probability x sum of impact rating" in these domains. The risk rating for each type of threat was referenced to a matrix and determined to have one of sixteen possible categories, which were further divided into four levels of risk: (1) high; (2) moderate; (3) low; and (4) very low. The model was pilot tested and was felt to be practical.
Conclusions: The model was relevant and useful for facilities to identify and prioritize planning activities for emergencies.
Keywords: competencies; education; healthcare facilities; preparedness; risk assessment; training; vulnerabilities
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Earthquake Preparedness in Tehran

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Introduction: Iran is an earthquake-prone country. If an earthquake occurs in a large city like Tehran, the damage will be severe. Therefore, exercises and drills are needed to prepare the country.
Methods: A earthquake measuring 5.5 Richter was simulated in Sina hospital. The use of equiment, medical staff, and medication were measured.
Results: There was enough equipment, medication, and staff, but cooperation with police and fire officials was not good.
Discussion: Regardless of necessary material during a disaster, if there is not strong coordination, not all efforts would be useful.
Keywords: drill; earthquake; Iran; safe hospital
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Poster Presentations—Safe Medical Facilities

(S104) Longitudinal Expandable Shelter for Health Emergency Response during Disasters

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Introduction: During local emergencies, hospitals are the final destination of the rescue process. Therefore, effective health mobile structures hmust be inserted between hospitals and the place of the event in order to provide the best treatment (using appropriate and easy to use equipment) for safer and faster evacuation to hospitals.
Methods: A literature review national and international disaster medicine standards were the basis for this study to provide clinical, hygienic, and organizational needs to satisfy for the emergency structure design. Project requirements were obtained by analyzing the structural and clinical processes. The structure must be able to be installed on every type of ground, be resistant to every weather condition, and be transported easily and quickly. Technological equipment is obtained from clinical evaluation for patient stabilization.
Results: This structure is a Longitudinal Expandable Shelter (LES) for health emergency responses and is organized in three internal sub-areas. The possibility of expandability facilitates rapid transportation and easy deployment. The sub-organization provides three clinical areas: diagnostic, therapeutic and pre-evacuation monitoring.