Methods: The research was completed in four main stages:

1. The literature about earthquakes and emergencies was studied. The relevant information was divided into sub-subjects.
2. A model that would examine the level of preparedness of the emergency services in the country was constructed. The model is based on a number of models for populations dealing with emergencies, which had been constructed by the Home Front Command and validated by experts. The level of preparedness was examined by conducting in-depth interviews with experts in the fields of emergencies and earthquakes, and by conducting quantitative surveys with a representative sample of the relevant researched population. A total of 532 managers in the emergency and rescue organizations, 505 adults, and a random sample of 2,648 fifth and sixth grade students was surveyed.
3. Based on the results of the examination of the level of preparedness, a national, multi-organizational model for saving lives at the preparedness and first response stages after an earthquake was constructed.
4. Seniors and experts on the subject were surveyed using questionnaires and interviews. With these data, the national model was validated using the Delphi method. During this stage, the model was updated twice.

Results: One of the main failures detected was the lack of a national operating comprehension that could be used as a common language between all the forces, from which each force could develop its own coordinated policy. Therefore, the main goal of constructing the "National Multi-Organizational Model for Saving Lives in the Event of an Earthquake, in the Preparedness and First Response Stages", is to create a common language and synchronization between all the forces working during an event, while using the resources and advantages of each force in order to save lives and minimize the damage.

Keywords: earthquake; multi-organizational model; national model; preparedness; response
Prehosp Disaster Med

Cyclone Nargis—The Experience of Team Singapore

A. Tyebally; Y.K. Ong; F. Lateef; J.D. Macachor; Muruges
Members of Team Singapore Medical Relief Mission to Myanmar, Cyclone Nargis 2008, Singapore

Introduction: Cyclone Nargis struck on 02 May 2008 and was the worst disaster due to natural hazards in the history of Myanmar. It left >146,000 people dead and thousands more homeless. More than 200 hospitals and 400 clinics were destroyed by the cyclone. Singapore was the first non-border country to send a medical team to help Myanmar with the disaster relief efforts. This assistance was provided using mobile teams.

Methods: Demographic and medical data from the medical records of the 4,458 patients seen by Team Singapore was collected and analyzed.

Results: A total of 4,458 patients were seen in nine operational days from the teams' visits to a hospital, eight camps/villages, an orphanage, and a retirement home. Sixty-five percent of the patients were female. More than a quarter were <12 years old, and 16.5% were >60 years old. The pediatric patients mainly suffered from respiratory (26%) and gastrointestinal infections (28%), whereas the adults had a significant number of musculoskeletal complaints (21%), non-specific diagnoses (19%), and chronic medical conditions (11%). Only 6% patients required surgical interventions. A significant number of complaints were related to post-traumatic stress disorder (10%).

Conclusions: The use of mobile clinics was useful in providing treatment to patients who did not have access to medical care. None of the expected post-disaster epidemics occurred. Given the patient load, it was useful to have a pediatrician, primary healthcare physician, and emergency physician to cope with the cyclone-related medical conditions.

Keywords: cylone; Cyclone Nargis; disaster; Myanmar; Team Singapore
Prehosp Disaster Med

Lightning Strike Injuries in Tatra Mountains

Gula Przemyslaw, MD, PhD; Sylewriusz Kosinski, MD
Tatra Mountain Rescue Service (TOPR), Poland

Introduction: Between 1993 and 2009, 29 persons (nine women and 20 men) were struck by the lighting in the mountains areas of Poland. Twenty-one of the accidents occurred on mountain ridges, six on descent, and two in the valleys.

Methods: The were analyzed the mechanisms of the lightning strikes and the related health effects and injuries.

Results: Seven of the victims suffered from cardiac arrest. Spontaneous circulation was restored after cardiopulmonary resuscitation (CPR) on two patients (one died in the hospital and one was discharged in good neurological status). Twenty-four patients were transported to the hospital (five died at the accident site). Among those patients transported, 22 patients had severe burns and Lichtenberg figures. All patients developed temporary arrhythmias and electrolyte imbalance. Twelve had different levels of neurological disorders and bone fractures due to secondary injuries were present in 11 patients. Twenty-four of the injured were rescued by the helicopter team.

Conclusions: Most of the injuries occurred on the mountain ridges. The total fatality rate was 20.6% and 91.6% of the survivors developed burns and Lichtenberg figures. Other symptoms included temporary and spontaneously passing arrhythmias, neurological deficits, and acoustic barotraumas. The presence of associated injuries should lead to treating all the lightening-strike patients according to advanced trauma life support procedures.

Keywords: burns; injuries; lightning; rescue; Tatra Mountains
Prehosp Disaster Med