## (P1-63) Post-Tsunami Hospital Evacuation Preparedness Improved by Development of Portable Medical Supply Caches

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**Background:** On September 29, 2009, an earthquake-caused tsunami struck American Samoa with only 20 minutes warning. Personnel successfully evacuated patients from the hospital within 20 minutes. The organization and transportation of medical supplies required for patient care took 90 minutes.

**Objective:** To describe a hospital evacuation exercise designed to identify critical medical supplies, and test their transport, and use in a field-hospital setting.

**Methods:** A retrospective review of hospital emergency preparedness and Boy Scout Eagle Project minutes, participant surveys, and key-informant interviews was performed. Descriptive statistics were used to evaluate data.

Results: Unit supervisors hospital-wide were tasked with designing portable supply caches for the care of typical unit patients for 72 hours. Nine hospital units participated (ED, Surgery, Medicine, Pediatrics, Labor & Delivery, Maternity, Nursery/ NICU, ICU, Hemodialysis) in the exercise. Unit evacuation teams (1 physician & 2 nurses) carried caches by foot to a nearby field clinic site (1/4 mile). Cache transport times ranged from 3 minutes (maternity ward) to 15.5 minutes (hemodialysis), averaging 11.2 minutes. Hospital leadership arrived in 4 minutes, and maintenance staff with portable power and oxygen in 23 minutes. Fifty-seven community volunteers (age 9 months – 60 years) under Eagle Scout candidate leadership were prepared as moulaged mock patients. Unit teams used evacuated supplies to provide medical care for 6 mock patients each, listing missing or insufficient supplies at exercise end. Cache supply deficits noted by participating teams included: portable oxygen (66%), blood pressure cuffs (44%), thermometers (44%), select pharmaceuticals (44%), and others. Reported cache deficits and exercise lessons learned were reported hospital-wide for incorporation into preparedness planning.

**Conclusion:** The hospital unit medical supply cache exercise was effective in addressing prior evacuation deficits. Hospital collaboration with community service volunteers provides exercise realism for participants and increases community awareness for emergency preparedness.

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## (P1-64) E-Learning for Staff Education on Managing Catastrophe Plan – Hospital in Sao Paulo – Brazil

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Introduction: Staff education and qualification is a safety issue to maintain employees ready to act whenever the catastrophe plan is deflagrated especially since it only happens once in a while. Considering that catastrophe is an unexpected event and most of the time an unusual scenario, the risk of inefficient **Objective:** To describe the e-learning as a continuous training methodology to keep staff prepared to manage victims from a catastrophic situation whenever it happens.

Methodology: E-learning is a methodology for distance learning with focused content, pedagogy, technology and instructional system design aimed to deliver education. E-learning has advantages such as: a rapid update, customization of content, access flexibility, continued availability, reduced time for learning, training of a large number of employees with access control and release reporting. The development of e-learning is based on the following phases: analysis of topic relevance, evaluation by expert professional, relevance and applicability as educational strategy, planning and content construction with related areas, development of the storyboard and formatting with an instructional designer. The content of the e-learning Catastrophe Plan include definition of catastrophe, STAR screening method, roles and responsibilities, attendance flows, tests. Its duration was 30 minutes.

**Results:** During 03 months the e-learning of Catastrophe Plan was available in the intranet to Albert Einstein employees. A total of 3104 employees were trained representing 56% of target public (n = 5541). After this period, the e-learning became constantly available and part of the new employees admission process.

**Conclusion:** E-learning is an innovative educational methodology that contributes to the retention and generation of knowledge. The care and support team during the simulations in 2010 showed better performance when compared to 2009 due to the capability of this tool to spread the knowledge. *Prebasp Disaster Med* 2011;26(Suppl. 1):s119

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# (P1-65) Simulation Haute Fidélité Et Medecine De Catastrophe

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L'exercice medical ou soignant en conditions de medecine de catastrophe se detache de l'exercice classique du fait du nombre important de victimes a traiter en un laps de temps reduit. S'y surajoute, en contexte chimique, le port d'une tenue de protection reduisant de maniere significative les performances du soignant qui la porte. Il est donc necessaire de proposer aux equipes amenees a exercer dans ces conditions des seances d'entrainement visant a acquerir la competence requise en pareilles circonstances. Une premiere etape a ete franchie avec la validation de realisation en tenue de protection des gestes (perfusion intraveineuse ou intraosseuse, controle des voies aeriennes superieures, ventilation assistee) utiles dans ce contexte. L'etape suivante qui vient de s'ouvrir vise a "immerger" le soignant dans une ambiance quasi-reelle (port de la tenue de protection, victime realiste et surtout dynamique, reagissant aux diverses actions entreprises). Il lui sera ainsi possible d'acquerir non seulement la gestuelle mais egalement la mise en pratique des notions enseignees lors des formations theoriques, avec un resultat beaucoup plus parlant et plus rapidement evaluable. Le cout eleve, au moins pour

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l'instant, des mannequins constitue un ultime obstacle pour la realisation d'exercices veritablement realistes associant de nombreuses victims

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### (P1-66) Operating a Field Hospital after the Earthquake at Haiti - The Israeli Experience

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Introduction: On January 12th 2010 an earthquake of 7.0 magnitude struck Haiti. The region suffered an estimated 230,000 fatalities with approximately 250,000 injured and more than one million people who lost their houses. The government of Israel dispatched a military task force consisting of 230 people. 121 of them were medical personnel from the IDF Medical Corps. The force's primary mission was to establish a field hospital in Haiti and to give medical support to as many people as possible. We left Israel about 50 hours after the Earthquake and the field hospital started operating at Porte-Au-Prince 89 hours after the earthquake.

Materials and Methods: During our 10 days of operating, 1111 patients were treated at our hospital. 363 of them were pediatric patients (younger than 18 years). 272 pediatric patients were treated by the pediatric division, 79 (29%) were hospitalized and 57 (21%) required surgery.

Results: There were 16 deliveries, 5 Neonates, 244 Operations and 17 Intra-hospital deaths. We noticed a change of pattern of the hospital activity, regarding the cause of the admission after the sixth day. On the ninth day most of the patients who came to our hospital were due to a non-traumatic cause. At the pediatric department, the common treatments included wound debridement and dressing, I.V. rehydration and antibiotic treatment, and a neonatal unit, the sole one in the inflicted area. Operations when needed were done by the orthopedic team and the pediatric surgeon.

Conclusions: Operating a field hospital for a population inflicted by natural disaster is a complex mission and since pediatric care has its own unique, challenging characteristics, operating a pediatric division in such a field hospital is a continuous challenge, which includes preparedness in uncertainty and the necessity to have dynamic treatment strategy according to the unique circumstances.

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#### (P1-67) Collaboration of Military and Civil EMS during Russian Georgian War 2008

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Introduction: During 2008 Russian Federation realized major aggression against its direct neighbor, the sovereign republic of Georgia. It was Russia's attempt to crown its long time aggressive politics by force, using military forces. EMS physicians from

Tbilisi went to the Gori district on August 8 at first light, 14 brigades were sent. At noontime of August 8, their number was increased up to 40. 6 brigades of disaster medicine experts joined them as well.

Results: Destination site for the beginning was the village Tkviavi, where a military field hospital was assembled and a Military Hospital in Gori. Later 6 brigades were withdrawn towards the village Avnevi. During fighting, wounded victims were evacuated from the battlefield, where initial triage was done. Evacuated victims were brought to the military hospital where the medical triage, emergency medical care and transportation to Gori military hospital or to Tbilisi hospitals was done. A portion of the wounded was directly taken to Gori military hospital and later to different civil hospitals in Tbilisi. Corpses were transported to Gori morgue as well. On August 9, the emergency care brigades and field hospital left Tkviavi and moved to the village Karaleti, then to Gori. On August 12, the occupied territory was totally evacuated by civil and military medical personnel. Although withdrawal of wounded was done on following days. Up to 2232 military and civil persons were assisted by EMS brigades during war period (8-12 August), from them 721 patients were transported among which 120 were severely injured.

Conclusion: Close collaboration between military and civil EMS gave the system opportunity to work in an organized manner. On the battlefield prepared military rescuers were active taking out wounded victims to the field or front-line hospitals from which civil emergency care brigades transported them to Tbilisi hospitals. Only 3 fatalities occurred during transportation.

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(P1-68) Experiences from the "Emergency Care for Trauma" Course for Support of Health System in Afghanistan as a NATO ISAF Medical Force

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Introduction: The experiences Afghan medical personnel gained from the "Emergency Care for Trauma" course are described in this presentation.

Method: The course was conducted 14-15 April, 2010 in Kabul, Afghanistan. It was evaluated retrospectively for: (1) course curriculum; (2) training instructors; (3) participant characteristics; (4) participant evaluations and course of events; (5) preparation; (6) execution; and (7) results.

Results: The course included 13 hours of theoretical discussion, six hours of skill practice stations, and 19 hours of training. The organization committee was composed of a president, two secretaries, six trainers, and six assistant trainers. There were three language interpreters. A total of 24 medical personnel attended the course. Pre- and post-tests were administered to the participants in order to evaluate the effectiveness of the course. Simultaneous translation was performed during the training sessions. The correct response rates for test questions increased from 34.6% prior to the course, to 80.3% after

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