acids Delivery: (1) New delivery methods: micro- and nanorobots modeled on insects (MEMS systems), microencapsulation; (2) Directed Energy Weapons Mitigation: (1) Development of systems for identifying and dealing with unknown agents and symptoms; (2) Hazard Identification, Risk Estimation, Risk Reduction Strategies, Residual Risk Evaluation and Monitoring, Mitigation and Recovery Leadership skills needed during uncertainty: Sense making, Visioning, Relating, Inventing.
Conclusions: Preparing for events without training for new and novel CB agents leaves us unprepared. Incorporating modern science with leadership skills will lessen the impact of future CB release and improve organizational resiliency. The main mistake people make is that they fear current problems more than future ones. Carl von Clausewitz Chance favors the prepared mind. Louis Pasteur.
Prehosp Disaster Med 2011;26(Suppl. 1):s106–s107
doi:10.1017/S1049023X11003566

(P1-25) Risk Management in Emergency Situations: Does Germ Simulation Improve the Level of Care?

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Simulation is a major part of the training process for emergency medical professionals. The scenery, sounds, smells, situations, etc. all have been replicated for the benefit of the student. These simulation factors prepare the student to react according to the trainings they received in a controlled environment, but what about germ simulation? The premise of this research is to determine if the outcome of treatment changes when germ simulation is added as a factor. The majority of emergency medical simulations do not factor germs into the situation, and potentially leave the emergency responders exposed, which causes liability, complications, side effects, etc. Generally, the current standards for care and certification include lessons on blood-borne pathogens, disease prevention, personal protective equipment, etc., but there still is a shortcoming between the classroom lessons and a real situation. This research helps answer the following questions: What is the simulation method that can best replicate a real situation? How much potential disease exposure can an emergency medical responder expect? Does the level of treatment increase with the introduction of a germ simulation? What behavior changes occur when germs become a main factor in a simulation? The goal of this research and presentation is to find out if the amount of risk can be reduced with more comprehensive simulations. Ultimately, researchers hope to diminish the risk of disease and illness spreading among responders and at the same time increase the level of care among disaster victims.
Prehosp Disaster Med 2011;26(Suppl. 1):s107
doi:10.1017/S1049023X11003578

(P1-26) Abdominal Trauma: Arteriography versus Laparotomy

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Selective non-operative management of abdominal visceral lesions is one of the most important and challenging changes that occurred in trauma patient care over the last 20 years. The main advantage of this type of management is the avoidance of unnecessary/non-therapeutic laparotomies. Trauma surgeons who deal with this type of treatment are worried of missed abdominal injuries. Modern diagnostic tools (spiral computed tomography, ultrasound, angiography, laparoscopy) allow trauma surgeons to accurately characterize the lesions to be addressed non-operatively. This presentation discusses the main elements of selective, non-operative management of principle solid visceral lesions (liver, spleen, and kidney). The advantages and limitations of the main diagnostic instruments used for evaluation of trauma patients allocated to non-operative management will be highlighted. Polytrauma patients in a Leve-1 trauma center over the last five years were selected and outcomes were analyzed. Pancreatic trauma remains an operative injury. However, surgeons must temper the enthusiasm for non-operative management of patients with solid organ injury, and exclude patients who would best be treated with surgery from this management scheme. Emergency care of the patients according the golden hour and team ability must be considered.
Prehosp Disaster Med 2011;26(Suppl. 1):s107
doi:10.1017/S1049023X1100358X

(P1-27) Jumbo Air Crash: A Serious Disaster Management Question

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The new jumbo jets, such as the Airbus680, which can transport 600 to 800 passengers, need special consideration in case of a crash, especially if the crash occurs near the airport. Survival parameters depend on the effect of the brutal deceleration and the high probability of thermic effects due to fire, but also the toxicity of the smoke. These new jets requires a different approach to planning for crashes. The scale of the disaster will be totally new in terms of numbers of casualties, numbers of fatalities, and numbers of family members to for whom to provide psychological and technical information. In addition, the problem of identification of the victims will be heightened, and will require more forensic teams. There is, in fact, only one way to manage this kind of disaster: international cooperation and coordination.
Prehosp Disaster Med 2011;26(Suppl. 1):s107
doi:10.1017/S1049023X11003591

(P1-28) Primary Health Care (PHC) Approach in Emergencies and Disasters

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This presentation will focus on outlining the issues and challenges to developing a framework for a PHC approach for emergencies and disasters. The emphasis will be how the use of the PHC principles to achieve equity and social justice can improve disaster response. These approaches include; universal coverage/equity, community participation, intersectoral collaboration and the use of appropriate technology. Discussion will include; the revitalization of PHC and the role of PHC in emergencies and the challenges of the PHC approach in emergencies. Responding to emergencies from the perspective of disaster risk

management, community based health work force and self care will be reviewed. Finally, pre-emergency preparedness focusing on community based benchmarks, community based disaster management planning and strengthening health systems based on PHC will be discussed.
Prehosp Disaster Med 2011;26(Suppl. 1):s107–s108
doi:10.1017/S1049023X11003608

(P1-29) Catastrophe Management Plan, Simulations and Results – An Experience of a Private Hospital in Brazil

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Introduction: The terms catastrophe and disaster have been frequently heard worldwide due to situations like earthquakes, floods and events provoked by man as the September 11th and Anthrax attack. Catastrophe means all situations where material and human resources available in a healthcare facility are not enough to assist a large number of victims admitted at the same time. Accreditation requires having a plan to manage effectively those situations, assessing safely as much victims as possible.
Objective: To describe the catastrophe plan and its management in a private hospital.
Methodology: Hospital Albert Einstein is located close to a huge soccer game stadium and near to the State Government Hall. This was the reason to have a plan focusing on casualties with a large number of victims. The literature was revised to choose the triage methodology. Triage to identify the priority of patients' assessment based on their condition, possibility of treatment and determining discharge for those without visible risk. Simulation was implemented, followed by debriefing to register lessons learned.
Results: An algorithm was developed with a crisis center and defining care and support areas in the organizations to manage the victims at Emergency Room and triage field. The plan was effectively deflagrated twice: 47 victims from a bus accident and 25 from a policeman strike. Debriefing was done in all opportunities and communication is the main issue; 15 simulations have been done for training purpose, with specific goals.
Conclusion: Hospital is a high risk environment itself for an internal or external incident depending on its localization. A disaster plan is necessary to improve everyone safety, to organize resources, to respond effectively to such situations and take the organization back to regular operation as soon as possible. Simulations are essential to guarantee staff competency and organization support and response to adverse situations.
Prehosp Disaster Med 2011;26(Suppl. 1):s108
doi:10.1017/S1049023X1100361X

(P1-30) Natural Disasters Challenge for Emergency and Rescue Services - Lessons Learned

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Natural disasters challenge for Emergency and Rescue Services-lessons learned Przemyslaw Gula MD PhD, Edyta Szafran Institute for Emergency Medicine. Krakow, Poland.

In the period 2008–2010 Poland experienced series of natural disasters including 3 large scales flooding, 2 periods of extremely high snowfalls followed by low temperature periods and finally local flush flooding in different locations. The time of each disaster elapsed from several days up to 6 weeks. All of them had severe impact on local infrastructure by destroying road systems, communication as well as healthcare and fire brigade facilities. The rescue efforts required evacuation, Search and Rescue operations, providing medical care and shelter. The most problems occurred in following areas: - large scale evacuation - collapse of communication systems (including 112 dispatch) - inadequate number of specialized rescue equipment (helicopters, vehicles, boats, snowmobiles, etc.) - providing EMS in affected areas - necessity of evacuating hospitals. The lessons learned showed the need for following changes: - strong trans regional coordination in means of facilitation of utilizing civil protection and military recourses - unification of operative procedures for all actors of the response operation - improvement of communication systems and reducing their vulnerability on environmental factors - establishing regional crisis management and control centers, covering the emergency response activities in affected areas - need of large-scale use of HEMS as well as Police and military helicopters in natural disasters - need for better supply in specialized rescue equipment including recue motorboats, 4 wheels drive recue vehicles and ambulances, snowmobiles, quads in local response units. The main rule of commanding the entire operation is subsidiary. Local coordinating structures should be supported by regional and central governments by supplying necessary recourses. However the operational command should be unified and include all participating units and organizations.
Prehosp Disaster Med 2011;26(Suppl. 1):s108
doi:10.1017/S1049023X11003621

(P1-31) The Determinants of Competency for Emergency Medical Technician-II in Taiwan

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Background: The formal training for Emergency Medical Technician (EMT) in Taiwan was legislated by Emergency Medical Care Services Act in 1995. Very little research discusses the competency of EMTs. The purpose of this study was to assess the determinants of competency for the EMT-II in Taiwan.
Method: In June 2005, a cross-sectional survey was targeted on firefighters with EMT-II certificate and having a minimum work experience of three months in central Taiwan. Kirkpatrick's (1994) four-level model guided the development of conceptual framework and questionnaire. Structural Equation Modeling (SEM) was adopted for the analysis.
Results: One thousand and seventy-three EMT-IIs were included in the study. Majority of them were male (99.4%) with an average age of 34.46 years old. Among them, 96.5% were careered EMTs with 130.33 months of field experiences. The competency of EMT-II was measured by 4 indicators of error reduction, quality improvement, achievement orientation, and efficiency improvement. The construct of 'Capability