significant mortality and morbidity. Disasters may be caused by natural or man-made events. With either type, the forces of the event overwhelm the first responders and health organizations in the stricken community and outside assistance is required. Developing countries have the highest burden with limited available resources. Today's complex disasters have increased the need for mobile medical/surgical response teams to provide disaster care. The United States (US) Government created the International Medical Surgical Response Teams (IMSuRT), which, on short notice, deploy a multidisciplinary team of doctors, nurses, and other health professionals to disasters around the world. IMSuRT has a rapidly deployable, fully equipped field hospital. Historically, Massachusetts General Hospital (MGH) in Boston, Massachusetts, US, has played a significant role in responding to humanitarian efforts both within the US and internationally. The MGH nurses play key roles in several response teams, including IMSuRT. Disaster nursing has many unique challenges. Nurses practice daily under controlled situations and become expert in one specialty; however, in the disaster setting this is not possible. Disaster nursing requires a fundamental change in the care of patients. During disasters, nurses work in areas that are not their primary specialty. Disaster nurses must be prepared in the essentials of disaster response-this requires planning, preparation, and training with multiple simulation drills focusing on patient scenarios, equipment utilization, teamwork, triage, decontamination, and scene safety. We must be creative, adaptable, and flexible to the needs of the disaster. Most importantly, cultural sensitivity, and communication are important factors in the delivery of disaster care.

*Prehosp Disaster Med* 2011;26(Suppl. 1):s153–s154
doi:10.1017/S1049023X11004997

### (P2-56) Nurses' Knowledge, Skills and Perception Towards Disaster Response and Emergency Preparedness

*F.C. Wee*
Nursing Service, Singapore, Singapore

**Background:** Disaster response and emergency preparedness has taken a bigger role in our daily operations since the advent of events of September 11 2001. It is essential that nurses be prepared and trained to respond to disaster incidents. Nonetheless, we are largely unaware of how our nurses feel about their readiness to respond to these disaster incidents. This study aims to understand our nurses' knowledge, skills and perception towards disaster response and emergency preparedness.
**Method:** A self administered structured questionnaire survey was conducted for the nurses in our hospital. Using a 5 point Likert scale, the questionnaire covered knowledge, skills and perception of institutional and individual preparedness towards a disaster incident. The data was analyzed using SPSS 17.
**Results:** A convenient sample of 1143 nurses (response rate 95.5%) was studied over a 2-month period from 1st August to 30th September 2010. 55.7% of the surveyed nurses have not attended any training in disaster response. Despite that, more than 50% of them scored correctly in term of their knowledge in different types of disaster incidents. 75.3% of them have not been trained to don the HAZMET suite within the last 2 years. 72.9% do not know where to get the HAZMET suit in the event of a chemical incident. While 80.2% felt that the institution is able to respond to any disaster incident, only 41.3% felt that they were ready. In addition, 83.6% were willing to participate in future disaster incident response training. 77.1% agreed that being able to respond to a disaster incident should be part of their professional competency.
**Conclusions:** There is a need for the hospital to incorporate disaster preparedness into nursing education curriculum as a clinical core skill to ensure that nurses are ready to respond to disaster incidents.

*Prehosp Disaster Med* 2011;26(Suppl. 1):s154
doi:10.1017/S1049023X11005000

### (P2-57) When a Glue Sniffer Turns Weak

*J. Poh*
Department of Emergency Medicine, Singapore, Singapore

**Introduction and Discussion:** Inhalant abuse has become less common in Singapore. Awareness of glue sniffing and its complications has decreased among local physicians. Prolonged toluene exposure can result in renal tubular acidosis, with electrolyte and acid-base derangements, and should be considered in the differential diagnosis of any young patient with unexplained hypokalaemic periodic paralysis and normal anion gap metabolic acidosis. We present a typical case to illustrate the abnormalities and to heighten awareness among emergency physicians who may not have laboratory results on hand when evaluating causes of limb weakness.

*Prehosp Disaster Med* 2011;26(Suppl. 1):s154
doi:10.1017/S1049023X11005012

### (P2-58) A Multicasualty Event of Multiple Burn Victims Caused by Spout of Heated Hydrochloric Acid in a Chemical Plant

*N. Fuke,[1] M. Sato,[2] H. Shiga,[1] M. Yamashita,[1] T. Yokoi,[1] Y. Kobayashi,[1] A. Kobayashi,[1] R. Ikita[1]*
1. Emergency and Intensive Care Center, Ichihara, Chiba, Japan
2. Goi Branch, Ichihara, Chiba, Japan

**Background:** A sudden break-down of a heat-exchanger in vinyl chloride plant resulted in that 141 °C, 23% concentration of hydrochloric acid spouted out over the workers around it. Eight workers suffered and Ichihara City Fire Department was deployed in response to the call 3 minutes after the onset of the incident, 17 vehicles including 5 fire engines, 6 ambulances, and two helicopters. Finally three severely ( > 80% of TBSA) burned, two moderately (20–80%) burned, and three slightly ( < 20%) burned victims were identified and triaged. One severely burned was transferred at first to the closest tertiary care hospital (TUCMC) which existed within 2.5 km distance by an ambulance and other two and one moderately burned were transferred by helicopters to the neighboring tertiary care hospitals. Another moderately burned one was sent to TUCMC by an ambulance about 30 minutes later than the first one. Three slightly burned victims were sent to a local hospital and treated as an outpatient. This casualty mission was ended by 120 minutes after the call. Two among the three severely burned patients lost their lives but another severe one and two moderately burned were survived. Conclusions: With these considerations, the management of this multiple burn casualty was successful, partly because of small

number of the victims and of that the incident occurred in a weekday morning.
*Prehosp Disaster Med* 2011;26(Suppl. 1):s154–s155
doi:10.1017/S1049023X11005024

### (P2-59) Monocular Vision Loss Following Blunt Trauma

*P.M. Pustinger, D. Paratore*
College of Osteopathic Medicine, East Lansing, United States of America

Blunt trauma is a leading cause of injury in the teenage population. The early detection of injury is the primary goal of emergency medicine in order to maintain an optimal functional capacity. This is of particular importance in the pediatric population. The following is a case presentation of monocular vision loss in a 14-year-old girl as a result of traumatic optic neuropathy. A motor vehicle collision was the cause of injury for this patient. She was an unrestrained rear seat passenger and struck her head on the driver's headrest during a frontal impact. A delayed presentation of over seven hours added to the complexity of this presentation. Further, a non-contrasted computed tomography (CT) scan of the head and orbits was unremarkable except for soft tissue swelling. The child was left with only light perception in the affected eye. This case presentation will illustrate the importance of immediate care, diagnostic studies, proper consultant input, follow-up care, and the natural history of the injury for this most unusual case.
*Prehosp Disaster Med* 2011;26(Suppl. 1):s155
doi:10.1017/S1049023X11005036

### (P2-60) Thyroid Storm in the Emergency Department

*M.J. Van veelen,[1] L. Yurtsever,[2] M. Baggen,[1] E.A. Dubois[3]*
1. Department of Internal Medicine, Rotterdam, Netherlands
2. Rotterdam, Netherlands
3. Cardiology, Rotterdam, Netherlands

**Case:** A 20-year-old woman was referred to the emergency department with rapid acceleration of complaints of palpitations, fever, diarrhea, and agitation that had been present for several weeks. During physical examination, the patient was uncomfortable and restless with a tachycardia of 170/minute, and a fever of 38.5 °C. Palpation of the neck revealed a small ventral, painless, solid elastic mass, more prominent on the right side, clinically suspicious for goiter. An electrocardiograph showed an atrial flutter of 150/min. Initial laboratory results showed an erythrocyte sedimentation rate of 35 mm/hour (0–20 mm/hour) and urine analysis tested positive for ketones.
**Outcome and Treatment:** The patient was presumed to be suffering from a thyroid storm. She was treated promptly with Propranolol 160 mg and Thiamazole 30 mg twice daily at the emergency department. She was admitted to the Cardiac Care Unit for observation of the heart rhythm, which slowed down to 110/minute the same day and her condition improved clinically. The following day her laboratory result confirmed the diagnosis with a thyroid-stimulating hormone of < 0.01 mIU/L (0.4–4.0 mIU/L) and a free thyroxine (T4) of > 75 pmol/l (10–22 pmol/l). Eventually, she was diagnosed with Graves Disease.
**Discussion:** Thyroid storm is an acute, life-threatening, hypermetabolic state induced by excessive release of thyroid hormones. The adult mortality rate is high (90%) if early diagnosis is not made and the patient is left untreated. Therefore, in case of clinical suspicion for thyroid storm, it is critical to start prompt treatment with Beta blockade and Thiamazole before the diagnosis can be confirmed biochemically.
*Prehosp Disaster Med* 2011;26(Suppl. 1):s155
doi:10.1017/S1049023X11005048

### (P2-61) Hiccups with Chapman/Carberra Sign And left Bundle Branch Block in Anterior Wall Myocardial Infarction

*D. Mishra, D.T. Koli*
Emergency Department, New Delhi, India

Patients with myocardial infarction can present to the Emergency Department with atypical symptoms. A 60-year-old male presented with a fever for two days and ongoing hiccups he had experienced for four hours. He also had experienced an episode of vomiting. An electrocardiograph revealed ascending limbs of the S-waves in leads V3/V4, notching > 0.05 seconds in the ascending limbs of the R-waves in leads I, aVL, V6, and the presence of a left bundle branch block.
Keywords: emergency department; fever; hiccups; left bundle branch block; myocardial infraction
*Prehosp Disaster Med* 2011;26(Suppl. 1):s155
doi:10.1017/S1049023X1100505X

### (P2-62) An Infrequent Case of Orthopedic Emergencies – Open Dorsal Dislocation of the Proximal Interphalangeal (PIP) Joint Dislocation

*A. Bayir,[1] U. Kaldirim,[1] S. Ardic,[2] Y.E. Eyi,[1] I. Arziman,[1] M. Durusu[1]*
1. Department of Emergency Medicine, Etlik - Ankara, Turkey
2. Emergency Medicine, Ankara, Turkey

**Introduction:** Reducible open dorsal dislocation of the single finger's PIP joint is an infrequent case of orthopedic emergencies. The severity of this injury may be underestimated. These injuries are associated with long-term complications such as synovitis, stiffness, degenerative arthrosis, septic arthritis, and loss of the digit if suboptimally treated.
**Case:** A 90-year-old male came to the emergency department with an open dorsal PIP dislocation due to a fall on his right hand. There was a transverse skin laceration just proximal to the PIP flexion crease of his small and ring fingers. The condyles of his small finger's proximal phalanx protruded through the wound. X-rays showed a dorsal dislocation of the PIP joint without fracture. There was no neurovascular injury determined. The proximal phalanx was hyperextended slightly with gentle axial traction. After irrigation, the skin wound was closed primarily without repair of damaged structures, and systemic antibiotherapy was performed for a week. The PIP joint was immobilized for three weeks by applying the splint dorsally with the joint in 20 degrees of flexion. Active range of motion exercises were then implemented, and the patient regained full digital flexion with only a 10 degree loss of extension within eight weeks.
**Discussion:** Forced hyperextension with axial compression causes a dorsal dislocation of the PIP joint. Dorsal PIP dislocations are more common than volar IP dislocation.