(P2-17) "Burning Valentine," a Simulated Evacuation Exercise of a Burn Unit (BU)

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Background: According to the Belgian Hospital Disaster Planning Act, all hospitals are required to have written disaster plans and to routinely conduct annual disaster drills. In 2010, the management of the Military Hospital decided to organize an evacuation exercise of the newly built 24-bed BU.
Aim: To evaluate this new BU's evacuation plan and drills and the overall hospital emergency incident response and command system.
Methods and Results: It was decided to conduct a simulated evacuation exercise following an internal fire, before the BU effectively was put into use, thereby deploying fashioned simulated patients and visitors but bringing into action the regular attending medical, nursing and logistic staff. A multidisciplinary design and organizing team was launched, consisting of the hospitals disaster preparedness coordinator, the EMS-staff, external burn care, emergency incident management and operational engineering experts. The appointed objectives for evaluation were the knowledge of the regular evacuation drills, especially the clearance of an intensive care room; access to evacuation routes; visibility of safety guidelines; mission and tasks of the hospital's first response team and the medical incident manager; communication and information flow and the establishment of the hospital's coordination committee. In the mean time and following lessons learned, a number of mitigation measures have been instituted: adequate identification of evacuated rooms, new configuration of the fire detection alarm, optimized access to stairwells and elevators, adjustment of action cards and specific fire fighting training for hospital staff. Finally the decision was made not to purchase specific evacuation equipment for the movement of patients.
Conclusion: Taking advantage of the BU's provisional vacancy, a simulated hospital evacuation exercise increased the hospital emergency preparedness, awareness and response to disasters within the hospital, in particular in a critical care department, otherwise difficult to assess.
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(P2-18) ICU Surge Capacity in Australian Major Trauma Centres

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Introduction: Mass casualty incidents (MCIs), requiring Trauma critical care, are increasingly likely. The ability to scale operations up i.e. 'surge capacity', is vital for ensuring scarce resources are used efficiently. The number of intensive care unit (ICU) beds is one of the key resources and indicators of a hospital's capacity and thus a vital area to target when assessing a systems ability to surge its Trauma ICU capabilities.
Objective: The study attempted to assess whether ICU facilities at major hospitals in large Australian cities would be able to respond to an event on the magnitude of the Madrid tragedy. This is the first report to measure Australia's major hospitals intensive care trauma surge capacity using Madrid as a standard.
Methods: In this prospective, cross-sectional analysis, we conducted a survey of major urban ICU trauma centres in the 8 state and Territory Capital cities of Australia. 14 Trauma Centre ICU's were targeted. The study was composed of two parts, A & B. Part A of the study consisted of an online survey, Part B, consisted of a follow-up telephone questionnaire. Full Ethics approval was sought and obtained.
Results: There were 8 replies to the survey giving a 57% participation rate. At the time of this snap-shot survey the total number of Physically available ICU beds throughout the 8 Level I trauma centres was 52.5. All hospitals had at least 3 spare beds. This ranged from 3 to 10 beds. After accounting for the flux in beds post admissions & discharges there was a 21% increase in bed availability, which was further increased by a magnitude of 28% to an average of 10.125 beds, if all elective surgical procedures were cancelled. When using the Madrid ICU surge (29 new ICU patients) as a gold standard against which to compare, it was found the largest trauma ICU in Australia could have managed 62% of this surge. On average the 8 trauma centres would have handled only 34.75% of the Madrid ICU surge.
Conclusions: In the event of a major traumatic disaster on the scale of the Madrid atrocity, few if any of Australia's major trauma centres have the capacity to cope with the requisite surge. More research and novel ways of addressing this challenge are needed.
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(P2-19) A Modular Portable Emergency Department Expansion Setup, Experience during the H1N1 Pandemic

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The recent H1N1 pandemic presented severe challenges to many emergency departments (ED). At our institution it caused overcapacity issues with increasing length of stay and increasing patients leaving before treatment. The emergency department space at the hospital was already fully used including hallway beds. Other clinical space could not be taken for ED expansion, as it was also all maximally used.
Methods: Portable mobile ED expansion modules were developed consisting of ED supply carts, pharmacy items and a wireless ED information system (EDIS) integrated with computers on wheels. This EDIS provided internet access from anywhere in the hospital, enabling access to clinical databases, order entry for testing, medications and discharge instructions, providing full operability of ED functions. This complete assembly can be stored in a small storage area. The H1N1 pandemic allowed for practical testing of this system. This system was deployed to a nearby hospital clinic that closed at 5 pm. The expansion module operated from 6pm to 10pm staffed with two providers. Data was compared between days when the surge clinic was in operation and days it was not. Data was collected on patients seen and left without being seen rates.
Results: During the trial period of 9 days, 1323 patients were seen in the ED and 112 were seen in the modular clinic setting, representing 8.5% of the total ED volume. No technical problems were noted and the system worked as designed. We

observed increased satisfaction from both staff and patients. No reduction in the number of patients leaving without treatment was noted in either group (5/day).
Conclusion: A modular portable ED expansion setup is practical and may increase ED capacity at times of maximal patient volumes. These materials are easily storable and build surge capacity for other events.
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(P2-20) Explosion At A Steelwork Plant

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Introduction: On the night of 06 December 2007, an explosion occurred at a steelworks plant in the city of Turin. The incident involved 10 people. The emergency medical services (EMS 118 Turin) declared a mass-casualty incident (MCI).
Objectives: The aim of this case report is to analyze the response of the EMS 118 Turin to the MCI in order to identify problems or short-comings and improve the service for future responses.
Methods: Information from the dispatch center, medical report of the EMS, and hospitals that received the patients were analyzed.
Results: The emergency call was placed at 01:04 hours, and the MCI was declared closed at 04:40 hours. The disaster, in according to Disaster Severity Scale (DSS), was classified 3. The METHANE message was sent to the dispatch center by the first ambulance 4 minutes after the call. There were 10 patients: seven T1; one T2; and two T3. The dispatch center deployed nine teams, which consisted of five advanced life support (ALS) teams and four basic life support (BLS) teams. All of the casualties were able to walk when they arrived to the medical care. The T1 casualties had burns to > 80% of their body surface area (BSA), the T2 and T1 casualties suffered inhalation of smoke gas. The first casualties were evacuated to the hospital 28 minutes after the call. Four casualties (three T1 and one T3) were transported to the nearest hospital. the other four T1 casualties were transported to four different hospitals of the city. All the T1 casualties died in the next 24 days.
Conclusions: The management of resources during this MCI was suboptimal. The number of ALS teams that responded to the MCI was high considering the number of casualties and the time taken to resolve the incident. The lessons learned from this incident and other cases have permitted the EMS Turin to improve their response plan concerning the use of resources and surge capacity.
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(P2-21) Differences in Self-Protective Behavior between Hospital Workers and Community Care Workers in Israel during the Peak of A/H1N1 Pandemic

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Background: Effective function of the community care system is important during a pandemic. Self-protective behavior might help stop the spread of the disease during a pandemic and prevent system dysfunction because of personnel morbidity.
Objective: To compare the immunization rate and reported self-protective behavior of healthcare workers between hospitals and community care clinics during the peak of the winter A/H1N1 pandemic in Israel.
Methods: A questionnaire was completed by 1,147 healthcare workers in 21 hospitals and 40 primary care clinics in Israel between 26 November 2009 and 10 December 2009 (the peak of the winter A/H1N1 flu outbreak).
Results: The rate of vaccination against A/H1N1 among hospital workers (27.9%) was significantly higher compared with primary care clinics workers (19.3%) (O*R* = 0.691 (0.821–0.582)).
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(P2-22) Proposed Model for Cellular Medical Record in Emergency Medicine

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Introduction: In a hypothetical situation, an emergency services team is launched to treat a man who collapsed in the street. The team finds John Doe's mobile phone, and within seconds retrieves the required clinical parameters from his Mobile Medical Record (MMR), thus, providing a life-saving treatment suited to his personal health condition. This study seeks to determine if the necessary clinical parameters, required at emergency situations have ever been examined in order to best match both emergency situations and cellular technology.
Objective: To characterize the clinical parameters that make up an MMR in the context of saving lives, and to propose a model for an MMR in emergency medicine.
Methods: The essential emergency medicine clinical parameters in the context of life-saving treatments were characterized through interviews with prehospital and hospital experts in emergency medicine. The results were analyzed with the help of a cellular multimedia expert in order to best incorporate the clinical parameters into cellular phones as MMRs.
Conclusion: Emergency medicine teams chose individual and specific clinical parameters in a certain order of appearance from the general medical record that should assembly, in their opinion, an emergency medicine MMR. A MMR was chosen by the emergency medicine treatment teams as one of their preferred communication methods. The MMR model, if applied correctly, will provide the emergency medicine treatment teams an available, reliable, homogeneous database of real time clinical parameters adapted to life-saving conditions. The MMR model represents a conceptual revolution of taking the medical record from the caregiver and transferring it to the patient, which can be constantly at hand at any given time or place in their mobile phones.
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