

during a disaster, particularly during a bio-event where the primary caregiver may become sick and unable to provide care. Emergency management sectors should anticipate high demands for respite care in community disaster planning.

Keywords: caregivers; family; emergency preparedness plans; recovery; stroke

Prehosp Disast Med 2009;24(2):s102–s103

(H69) Compliance with Statutory Major Incident Exercise Schedules in the Hospitals of North West England

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Introduction: Since 2004, there has been a statutory duty, under the Civil Contingencies Act, for designated receiving hospitals (those with emergency departments) to demonstrate fitness for and be able to respond to a major incident. National Emergency Planning guidance defines what is considered a sufficient exercise schedule for this purpose; a staff incident communication cascade test every six months, a hospital tabletop exercise every 12 months, and a live-casualty exercise every three years.

Methods: All receiving hospitals in the North West region of England were identified and their emergency preparedness leads approached during summer 2008 enquiring about the frequency and extent of their recent exercise schedule, the lessons that were learned and changes made as a result.

Results: A total of 18 of 23 identified organizations (78%) were willing to report. When exercises had occurred, most issues for improvement related to inadequate communication. Not surprisingly, these were centered on links between the emergency department and the hospital management team, but also between the management team and outside supporting agencies.

	Time interval	Compliance	% compliance
Communication test	6 months	12/18	66
Tabletop exercise	1 year	11/18	61
Live exercise	3 years	13/18	72

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Conclusions: In the event of a hospital in North West England failing to mount a sufficient response to a major incident, a significant proportion would be unable to show that they had taken all reasonable steps to ensure that their facility was capable of mounting that response. The hospital management potentially would be criminally liable for this failure.

Keywords: compliance; England; exercise; incident response; preparedness

Prehosp Disast Med 2009;24(2):s103

(H70) Surge Capacity Preparation for a Major Incident in the Hospitals of North West England

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Introduction: English National Health Service (NHS) hospitals work close to full capacity but have a statutory duty to cope with unexpected incidents and surges in admissions. This might be a Big Bang major incident or a Rising Tide infectious disease outbreak. The Civil Contingencies Act requires the NHS to prepare for such events, recognizing that the surge response must be dynamic, reflecting more than simply a count of empty hospital beds.

Methods: Using the Emergency Planning Guidance, an outline of essential capacity information to manage a patient surge was created. All designated hospitals in the North West of England were approached and asked to provide information on their anticipated surge plan; focus was on initial receiving capacity and accelerated discharge planning.

Results: A total of 18 of 23 organizations (78%) responded. Capacity also typically included consideration of patient triage categories. Accelerated discharge plans for current in-patients were present for all hospitals. A total of 15 of 18 (83%) had plans to increase the discharge rate by providing additional community nursing care. Fourteen of 18 (78%) had plans to increase discharge to residential and nursing facilities within the community. Only seven (39%) had exercised these processes.

	Capacity known	% Capacity known
Initial capacity to receive identified	14/18	78
Estimated hourly rate following initial load stated	7/18	39
Maximum capacity defined	8/18	44

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Conclusions: The planning guidance recommends that an ambulance service should know the real receiving capacity of its hospitals. While the data suggest some good practice, the lack of exercising raises the possibility that the numbers are aspirational.

Keywords: civil defense; disasters; England; preparedness; surge capacity

Prehosp Disast Med 2009;24(2):s103

(H71) Managing Surge Capacity—Lessons Learned from a National Mass-Casualty Simulation Exercise

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Introduction: Managing surge capacity is a challenge all emergency departments face during a mass-casualty incident. A full-scale, mass-casualty simulation exercise at Singapore General Hospital and the lessons learned will be reported. The experience of creating temporary intensive care unit beds and the presence of a forward anesthesia and surgical command at the emergency department also will be shared.

Methods: A real-time simulation exercise with trained volunteers playing casualties was conducted by the Ministry of Health. The hospital had to submit its mass-casualty protocol prior to the exercise. The Ministry provided a best-practice guideline on various hospital processes. Exercise controllers and peer observers from other hospitals were assigned to evaluate the various system processes and utilized a graded scoring system. The casualty load was timed to simulate surge capacity. The scenario of the exercise was a bomb blast at a public mass-transport station.

Results: A total of 180 casualty simulators were managed from the emergency department to their final inpatient disposition. The hospital's operational readiness and capabilities were validated and assessed. A four-tiered State of Readiness Score (fully ready, high state, acceptable state, barely ready) was given at the end of the exercise.

Conclusions: Mass-casualty simulation exercises provide more realism in rehearsing hospital disaster plans. The presence of anesthesia and surgical teams in the emergency department with direct command of operating theater space and intensive care beds helps in the timely disposition of critically injured casualties.

Keywords: emergency preparedness; hospital incident command system; simulation exercise; surge capacity

Prehosp Disast Med 2009;24(2):s103-s104

(H72) Emergency Medical Information System and the Strategy of Disaster Medicine

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At the time of the Great Hanshin-Awaji Earthquake in 2005, the maximum effort of the individual hospital was not sufficient to meet the excessive needs. A Japanese emergency medical system especially for disasters has been established after analyzing several experiences after the earthquake.

The conversion of medical institutions is necessary when a disaster impacts in a large region. During the acute phase of a disaster response, the Emergency Medical Information System (EMIS) becomes the tool that is used to share the information regarding damages to the medical institutions, the ability to accept patients, and the activities of Disaster Medical Assistance Teams (DMATs). In order to organize the effective use of EMIS by hospitals, specialists in disaster medicine are needed; DMATs are appropriate for this responsibility. The first priority of DMAT activities during the acute phase of disaster response is recovery of the disaster base hospital. The second priority is the establishment of the information-sharing system and transportation from the individual hospitals to the disaster base hospitals. The third priority is a transfer system from the disaster base hospital to hospitals in an unaffected area.

The conversion system of medical institutions of the area in which EMIS and DMATs are centered was established especially for the acute phase of disaster response. In Japan, the difficulty in accepting patients in emergency medical care has become a social problem. In the future,

this disaster medical system also should be applied to usual emergency medical care.

Keywords: acute phase; capacity building; disaster medical response teams; emergency medical information system; Japan; preparedness; response

Prehosp Disast Med 2009;24(2):s104

(H73) Resource Continuity Overview Database and Rating System

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Introduction: The ReCOVer (Resource Continuity Overview) Database and Rating System has been developed to highlight a hospital's capacity and level of preparedness during situations such as terrorism, natural disasters, pandemics, mass-casualty incidents, and infrastructural failures. The system focuses on the supply of essential resources (e.g., electricity, water, gas) of a hospital and compares it to their level of clinical acuity.

Objective: The objective of ReCOVer is to identify the vulnerability of key resources of healthcare facilities in the event of a disaster. ReCOVer also identifies further needs for improved risk management and business continuity planning at the local hospital level.

Methods: In order to develop the ReCOVer rating system, key experts including hospital engineers, disaster coordinators, fire personnel, security, information technology, and nurse unit managers were called upon to identify key resources and their dependencies. Following this, disaster scenarios were simulated to test the validity of the information provided. Questionnaires were issued to hospital resource managers to collect resource data. From this information, ReCOVer generated a rating of preparedness for each resource category.

Results: The information gathered from the questionnaires is available online to health managers who are able to evaluate preparedness and capacity of a single hospital or a cluster of hospitals across a wide geographical area.

Conclusions: ReCOVer highlights vulnerable facilities that by comparing resource capability against clinical acuity. This enables managers to make better decisions on improving disaster preparedness.

Keywords: capability; database; disaster; preparedness; resources

Prehosp Disast Med 2009;24(2):s104

(H74) Athens International Airport Medical Services Preparedness for Coping with Airport Disasters

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Introduction: Recently, a significant number of airplane accidents involving a large number of victims have been recorded. Athens International Airport (AIA) organizes annual field exercises in order to assure preparedness and a high level of training for all agencies involved. Airport Medical Services staffed by the Hellenic National Centre for Emergency Care (EKAB), deliver emergency medical care on a daily basis or in case of an airplane incident.