

(B13) Rapid Health and Needs Assessments after Disasters

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Background: Healthcare providers, stakeholders, and policy makers request a rapid insight into health status and needs of the affected population after disasters. No standardized rapid assessment tool is available for the Netherlands and other European countries. The aim of this article is to describe existing methods used worldwide and analyze them for the development of a workable rapid assessment tool.

Methods: A systematic review was executed, including original studies concerning a rapid health and/or needs assessment. The studies used were published between 1988 and 2008. The electronic databases of Medline, Embase, SciSearch, and Psycinfo were used.

Results: Twenty-five studies were included for this review. Most of the studies were of US origin and were related to disasters caused by natural hazards, especially the weather. In 14 studies, an assessment was executed using a questionnaire, seven studies used electronic records, and four used both methods. Questionnaires were used primarily to assess the health needs, while data records were used to assess the health status of disaster victims. The commonly used data collection methods were face-to-face interviews and hospital registration systems.

Conclusions: Ideally, a rapid assessment tool that does not add to the burden of disaster victims is needed. In this perspective, the use of existing medical records or the use of routinely collected data during disasters is the most promising. Since there is an increasing need for such a tool, this approach needs further examination.

Keywords: disasters; health status; needs; rapid assessment; tool

Prehosp Disast Med 2009;24(2):s23-s24

(B14) Coping with Sudden-Onset Emergencies in Emergency Departments

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Emergency departments in general hospitals play an important role during disasters. Emergency department staff must be able to cope with a sudden-onset incident while being sensitive to the spread of infectious diseases. Emergency departments must formulate a disaster plan that includes how to: (1) report the event; (2) organize medical care; (3) triage the wounded; and (4) maintain order. Emergency departments should cooperate with other departments and when shorthanded, divert some patients to reduce pressure. Staff should know the preliminary plan and be trained for using the emergency plan. During an earthquake or war, the hospital itself may be damaged. Therefore, the hospital should have two rescue plans and rescue teams, maintain contact with local rescue organizations, and request help when needed.

Keywords: acute-onset emergencies; disaster health; disaster management; disaster plan; disease prevention; preparedness; rescue

Prehosp Disast Med 2009;24(2):s24

(B15) Hurricane Ike: Lessons Learned from a Surgical Relief Mission

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Introduction: Hurricane Ike hit the Turks and Caicos Islands in September 2008. Grand Turk Hospital suffered significant structural damage with limited function. The experience of a surgical team deployed to Turks and Caicos in the aftermath of the hurricane was evaluated.

Methods: Three phases of the mission: (1) pre-departure; (2) location work; and (3) post-mission debriefing were evaluated retrospectively. Lessons learned were reviewed.

Results: Two surgeons and one anesthesiologist from a Level-1 Trauma Center were deployed to Turks and Caicos after the hurricane conditions subsided. Based on a needs assessment, basic medical and surgical supplies were provided. The response team worked with local health officials to staff local hospitals. During the mission, 40 patients were treated with trauma, general surgical, orthopedic, and obstetric diagnoses. Definitive care was provided to 37 of the 40 patients evaluated. There were two major surgical cases, three major traumas, and five minor surgical procedures. Most cases were the result of routine surgical problems or post-hurricane recovery efforts. Three patients were transferred to higher-level care facilities. Lessons learned identified at the post-mission debriefing included: (1) early deployment and report of needs assessment by pioneer team; (2) availability of orthopedic care; and (3) a requirement for satellite communication.

Conclusions: The rapid deployment of surgical teams to disaster areas with existing human and material resources is feasible. Although the number of disaster-related injuries was low, relief to local healthcare practitioners was critical to provide continuing medical and surgical care in the post-hurricane environment. Lessons learned will be applied to future missions.

Keywords: disaster; disaster management; Hurricane Ike; lessons learned; surgery

Prehosp Disast Med 2009;24(2):s24

(B16) Systematic Review by Meta-Narrative Mapping of Acute Kidney Injury in Disasters

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Background: Some major disasters produce a substantial number of patients with crush syndrome and acute renal

failure. Acute kidney injury (AKI) is preventable with early management. Insight into factors determining the population-at-risk is indispensable to allow for adequate logistical planning, a prerogative for success in disaster management. Many factors may affect the frequency of AKI: hampered rescue and transport possibilities; destroyed medical facilities; availability of sophisticated therapeutics; and the structure of the buildings. Dialysis therapy saves lives that otherwise would be lost. Currently, the primary problem is organizational. If huge catastrophes occur, complex therapeutic options must be offered to a large number of victims. **Methods:** A systematic review was conducted through meta-narrative mapping to create a repository of literature of disaster acute kidney injury management. Using a broad-based search strategy covering electronic databases (Cochrane, MEDLINE, EMBASE, etc.) and searching journals reporting on disasters, prehospital care, nephrology, dialysis and transplantation, and organizational management. The findings were grouped under themes and a picture was developed using contributions from different research approaches.

Results: The results will be presented at the Congress.

Conclusions: Awareness of evidence related to epidemiology, diagnosis, therapeutics and organizational issues, and development of guidelines in the area of disaster nephrology is critical to allow adequate logistical planning that is vital for this cohort of patients to prevent significant morbidity and mortality.

Keywords: acute kidney injury; acute renal failure; crush syndrome; disasters; patients

Prehosp Disast Med 2009;24(2):s24–s25

(B17) How Many Resources or Telephone Lines are Needed during a Mass-Casualty Incident?

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There are six emergency operation centers in Taiwan. During the response phase of a mass-casualty incident, the responsibilities of these operation centers include coordinating health-care resources and collecting the names of casualties. In October 2007, there was a mass-casualty incident in a mountainous area of central Taiwan. The event involved three emergency operation centers. There were 38 casualties in total. As the event occurred in a mountainous area, few medical resources were available.

All the patients were transferred to a hospital approximately 100 km away. The total response time was 16 hours. Five personnel were assigned to coordinate patient transportation, prepare the hospital to receive multiple casualties, and collect the names of the casualties. After the event, all of the telephone calls from an electronic recording system were reviewed in order to enhance future responses. After the event, a questionnaire was distributed to collect operational problems.

There were 205 total telephone calls during the event. Forty-six percent of phone calls were to confirm the names of casualties.

Between operators, there was a difference in the duration of each telephone call. In the post-event questionnaire,

all five operators noted they were “very busy” in the first four hours of the event, and the major problem was communication between operators. After this event, pre-designated worksheets and a white board for inter-operator coordination was designed.

Keywords: disaster management; emergency operations center; event; resources; telephone operator

Prehosp Disast Med 2009;24(2):s25

(B18) Development of Command and Control System and its Education of Disaster Medical Assistance Teams in Japan

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In 2005, the Disaster Medical Assistance Team (DMAT) training system began as a national disaster management measure. There were 500 DMATs, >2,000 healthcare providers, and 1,000 logisticians that were dispatched to the Chuetsu-oki earthquake in 2007 and the Iwate-Miyagi earthquake in 2008. A Japanese DMAT is characterized as a small team of five with emergency vehicles to go to the affected areas. The first team arrived in the affected area within three hours, and >40 teams gathered in the base hospital within 12 hours. A clear chain of command is critical in the effective use of these limited medical relief teams during the disaster, however, the DMAT system in Japan does not control the command and coordination of the disaster response organization, and thus, has an ambiguous strategy. The DMATs have been only trained in triage, medical procedures, and air transport management. There has been no training on the chain of command to facilitate organization. A two-day training course on the chain of command and control was developed last year. The training mainly consists of tabletop exercises with some mnemonics and discussion; 200 members have been certified.

Keywords: command and control; Disaster Medical Assistance Team; Japan; organization; training

Prehosp Disast Med 2009;24(2):s25

(B19) Assessment of Hospital Disaster and Non-Operational Defense Maneuver Performed in Imam Hossain Hospital

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Iran is ranked tenth in the world and fourth in Asia as the country most affected by disasters. Tehran, the capital, is the heart of the country's disaster planning. In this study, the training exercises of hospital personnel (including nursing, medical, administrative, and executive staff) were assessed. The exercises were based on scenarios, and personnel were presented with problems (regarding patients and administration) that considered the operational maneuvers prac-