

copied with MCIs and providing adequate medical care has accumulated, the increased need for *ad hoc* information required the development of a swift, effective computerized information system (CIS). The MCI CIS is designed to attach the everyday Computerized Medical Records System (CMRS) and to be operated after a MCI or during any other disaster. The ADAM CIS helps to collect a MCI patient's data in real-time and refer the information to the Information Center at Tel Aviv Sourasky Medical Center (TASMC). The ADAM system is managed by TASMC social workers working with the patients' families during the time of the event. The ADAM information system is connected to the Israeli Ministry of Health (MOH) and other hospitals. Social workers can help the families to look for their loved ones not only in TASMC, but also in other hospitals. Parallel to operating the ADAM information system, Tablet Portable Computer (TCP) is operated at the Emergency Department (ED) entrance. Data are entered into the TCP while admitting the patient into the ED; these data include demographic information as well as the first medical sorting information. All of the data are connected to the CMRS and ADAM information systems. This study will present the accumulated experience of using the computerized system in MCI in TASMC as well as the recommendations following this experience.

Keywords: computerized; disaster health management; Israel; mass-casualty incident; patient information

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Characteristics of Disaster Management in China—A Preliminary Evaluation of Flood Management in Jinan, 2007

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Introduction: On 18 July 2007, a flash flood in Jinan city caused 39 deaths, 171 injuries, affected 333,000 people, and caused an economic loss of RMB\$1.32 billion (US\$194 million). To better understand the current characteristics of disaster management in China, an evaluation of the management of this flood was conducted.

Methods: A semi-structured, one-on-one, in-person interview was conducted with six middle-level managers from public health and seismological sectors. The theme method was applied when analyzing the open-ended questions, and the median (minimum, maximum) was reported when analyzing the scales.

Results: On a scale of 1–10, the managers gave a 7.5 (5,10) for government policies for disaster preparedness, 7.5 (5, 10) for the disaster response, and 9.0 (6, 10) for the disaster recovery. Aspects that were managed well included: (1) strong political leadership in command and control; (2) swift mobilization of army personnel; (3) effective public health management in the field; and (4) management of casualties. Challenges in flood management included: (1) timely and accurate flood warning; (2) dissemination of the warning to public; (3) limited power of public health sectors in command;

(4) absorbing capacity in infrastructure; and (5) buffering capacity in resources such as antiseptics.

Conclusions: The managers appreciated the government policies for disaster management and were pleased with the outcome of the management of this flood. The advantages and challenges experienced while managing this flood may represent the characteristics of disaster management in China and could stimulate critical thinking in managing disasters worldwide.

Keywords: China; disaster management; evaluation; flood; manager
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Development of Disaster and Emergency Medicine in Nepal

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Nepal, a landlocked country between China and India, is developing disaster and emergency medicine. The Nepal Disaster and Emergency Medicine Center (NADEM) was created in 2007 with the goal of developing this specialty in Nepal. The first hospital was built in July 1889 and only planned with a Disaster Response Team in 1988 following a stampede at the national stadium in Kathmandu. Nepal is geographically, naturally, and politically prone to disasters and emergencies. In 1984, the Institute of Medicine at Tribhuvan University Teaching Hospital began providing emergency services using general practitioners (GPs). Since then, nearly all emergency departments are run by GPs along with house officers, nurses, and paramedics. There still is a lack of training, proper management, equipment, and infrastructure to provide disaster and emergency services to the public. The NADEM Center is creating coordination objectives between different institutions to organize a method of providing service. Other NADEM projects include: (1) NADEM continuing medical education; (2) publishing J-NADEM (the *Journal of the Nepal Disaster and Emergency Medicine*) and NewsHealth; (3) coordinating pre-hospital (emergency medical services), in-hospital, disaster, and critical care medicine; and (4) planning and implementing research, training, workshops, seminars, and conferences.

The NADEM Center will develop an International Institute of Disaster and Emergency Medicine with worldwide support and collaboration.

Keywords: assessment; development; disaster; emergency medicine; Nepal

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Disaster Medicine Care in Tschinali

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Introduction: The Disaster Medicine Centre “Zaschita” is a head coordinating body of the Russian Ministry of Health with the purpose of managing and providing medical relief in response to emergencies. The objective of this study was to analyze the field experience obtained by the All-Disaster Medicine Centre field hospital in Tschinali, Georgia.

Methods: An analysis of lessons learned from complex emergencies complicated by local military conflicts was performed.

Results: The medical staff of the Russian Disaster Medicine Service has experience responding to emergencies complicated by local military conflicts and by terrorist attacks (e.g., Khasavyurt in 1995, Budennovsk in 1995, Nord-Ost in 2003, Beslan in 2004). The events occurring in Tschinvali 06 August 2008 complicated the delivery of emergency medical care to the affected and injured in the absence of sufficient information or time for a complete hospital deployment. Approximately 1,600 persons were injured. All medical facilities in Tschinvali were destroyed. During a limited time period (eight hours) the medical products, medical staff, and mobile multi-profile hospitals were transported by air in collaboration with an on-site Emercom jet. The field hospital was deployed 30 kilometers from the city center. The majority of the injured were evacuated to the nearest regional hospitals after being primarily treated on-site.

Conclusions: The current situation is to be the base of action plan for immediate medical care delivery. Mass-casualty reception, triage, and immediate evacuation are the primary tasks and needs. The disaster response plan must be prepared for any potential conflict in each region before an emergency occurs.

Keywords: disaster health; disaster management; Georgia; Tschinvali; Zschita

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How Did the Hyogo Prefecture Renovate its Disaster Medical Services System based on the Lessons from Great Hanshin-Awaji Earthquake?

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The purpose of this study was to examine how Hyogo Prefecture renovated its disaster medical services system based on the lessons of the Great Hanshin-Awaji Earthquake.

Countermeasures taken after the earthquake were the:

1. Establishment of a disaster-related medical information network that was introduced to various institutions to collect and disseminate medical information in case of a disaster;
2. Designation of 15 core hospitals as Disaster Medical Centers which were expected to play a leading role in disaster management and to receive many patients during a disaster; and
3. Construction of the Hyogo Emergency Medical Center that was designated as a main Disaster Medical Center to train medical staff and operate the Emergency Medical Information Control Center.

There are several training courses for medical staff. The most important training course is the Disaster Medical Assistance Team (DMAT) training course. The DMAT trainings are held at the two main Disaster Medical Centers, the east National Disaster Medical Center, and the west Hyogo Emergency Medical Center. More than 200 teams have been cultivated.

A train accident occurred in Amagasaki in Hyogo on 25 April 2005. The Hyogo Emergency Medical Center served as the emergency information control center, dispatched ambulances, performed on-site triage and first aid, dis-

patched a second team by helicopter, received four severe cases by helicopters, dispatched a third team in the evening, provided confined-space medicine, and took initiative of a surveillance study of the casualties.

The disaster medical services system in Hyogo was improved based on the lessons from the Great Hanshin-Awaji Earthquake. Therefore, they functioned at the time of the train accident in Amagasaki.

Keywords: Amagasaki; disaster management; Great Hanshin-Awaji Earthquake; medical service; train accident

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Current Prehospital Trauma Care in Kampala, Uganda and a Pilot Training Program for Laypersons as First Responders

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Introduction: No formal prehospital emergency system exists in Kampala, Uganda. The aim of this study was to describe the current injury patterns seen by lay people in this setting and determine if laypersons can be trained to deliver basic prehospital trauma care effectively.

Methods: A modified basic first-aid course was conducted for police officers, taxi drivers, and local officials. Prior to the training, a cross-sectional survey was conducted to determine: the injury epidemiology and current skills, knowledge, and access to equipment. Tests were conducted before and after the training.

Results: During a six-month period, a total of 307 people participated and witnessed 19 traumatic emergencies per person (mean, 95% CI = 16–21). Thirty-one percent (n = 93) had witnessed a death (95% CI = 22–42%), with 1–5 deaths each (mean). The most common mechanisms were: road crashes (89%); assault (66%); and burns (44%). Fifty-two percent had some prior first-aid training (95% CI = 47–58) and 43% had some access to equipment (95% CI = 37–49). The most common aid given was lifting (82%, 95% CI = 77–87%) or transport (76%, 95% CI = 71–80%). Lack of knowledge (37%, 95% CI = 18–57%) or equipment (44%, 95% CI = 24–65) were major concerns when aid was not given. Initially, knowledge was low in: moving (29%); transport (32%); and bleeding control (38%). After training, the overall scores increased from 45% correct to 86% correct ($p < 0.0001$).

Conclusions: Laypersons witness a large number of emergencies and deaths in Kampala, Uganda. A context-appropriate, modified basic first-aid course for laypersons can improve knowledge and may be a step toward formal prehospital care.

Keywords: emergency medical services; first aid; lay people; prehospital; training; trauma

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