

Methods: An aircraft crash in proximity to the AIA was simulated in order to assess the required procedures and cooperation and coordination of all agencies involved. The Airport Medical Services assessed the emergency response plan, coordination with involved agencies, transition of command, medical response operations (triage, treatment, and transport), response performance, communications, data recording, role assignment, psychosocial support, equipment efficacy, etc. Evaluation forms of all previous exercises were reviewed and gaps and pitfalls were taken into consideration.

Results: Following the observations from previous exercises, improvements were seen in all aspects listed. Issues that can be improved further concerned communications, data recording, and equipment. These have been marked and will be addressed. Better cooperation with other involved agencies and better coordination of all medical personnel was achieved because of enhanced knowledge of the emergency plan, common training, and specific role assignment.

Conclusions: Emergency field exercises organized by the AIA and reviewed led to the identification and improvement of weaknesses and limitations of planning, maximizing performance, and improving the efficiency of the services provided.

Keywords: airplane crash; emergency response plan; field exercise; medical response; preparedness

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(H75) Hospital Preparedness for Non-Conventional Event—Drill Evaluation

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Introduction: The Tel Aviv Sourasky Medical Center's (TASMC) contingency plan for non-conventional war includes the training of personnel for immediate response. The hospital departments practice as mass-casualty incident (MCI) sites. The hospital's surge capacity is expanded with designated sites designed to handle hundreds of patients, activation of the hospital's call-up system, a computerized information center for the public, and the activation of the Incident Command System (ICS). All these goals were practiced during a non-conventional war drill in March 2008.

The drill involved the Home Front Command (HFC), the Magen David Adom (the National Israeli ambulance services, emergency medical services), the Israeli Police Forces, the Tel Aviv Municipality, and the Tel Aviv Firefighters.

Methods: Approximately 600 nurses, physicians, and paramedical personnel participated in the drill. There were four designated sites for MCI patients. All computer and communication systems were operational during the drill.

Results and Conclusions: Drills are a necessary tool to assess preparation and readiness. Drills provide the lessons and recommendations to be implemented at the next event.

Keywords: chemical, biological, radiological, nuclear, or explosive; drills; hospitals; non-conventional event; preparedness

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(H76) Mapping Support for a Health Emergency System

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Supporting populations during major incidents is based on the effective coordination of available medical resources. One way to ensure better preparation for emergency situations is to utilize geographic information system modeling methods to fuse infrastructure, demographic, and risk sources data. Synthesized maps, developed in close collaboration with the regional administration and emergency system, provide visualization of regional medical capabilities to cope with a major incident with a large number of casualties.

Mapping support for health emergency system employs a two-step approach. First, it uses GIS technology to process communication network data to determine distances between major incident sites and medical facilities. These distances, estimated types and number of casualties, and available medical resources are used to calculate the time needed to cope with a major incident in a specified point in the territory. The procedure is repeated for all the defined points in the area of interest. The result is a capability map—a map layer covering the territory and containing color-coded information on the capability of the territory to absorb the estimated number of casualties in a given time period.

In the second step, the capability map is fused with a risk profile and demographic data of the territory to identify which gaps are necessary to address (e.g., by improving management of resources or creating new resources within the territory).

The synthesized maps form a basis for policy analysis and scenario planning in major incident preparedness. Mapping support brings advantages to situational awareness for decision-makers. Local stakeholders can use these maps to enhance major incident planning, policy change support, and citizen education.

Keywords: capacity building; emergency; global information system; mapping; preparedness

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(H77) Disaster Preparedness by Residents in an Earthquake- and Tsunami-Prone Area

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Background: There is a 60% chance that major earthquakes with a magnitude of 7–8 will occur in the next 30 years on the southern coast of Mie, Japan. Since the southern rural part of the region is likely to be isolated by tsunami and landslides, residents are expected to take a self-reliant approach immediately after the earthquake.

Objective: The objective of this study was to develop a disaster medical support system in the region to encourage medical disaster preparedness.

Methods: Basic and advanced life support educational programs have been promoted. Lectures and workshops have been provided for public, local medical associations and the main hospital. For the local hospital, the Hospital Major

Incident Management and Support was used to introduce concept of disaster medicine. To educate disaster medicine physicians, the Basic Disaster Life Support/Advanced Disaster Life Support and the Advanced Hospital Life Support were applied with support from the University of New Mexico.

Results: Local residents, including public and medical personnel, began to acquire a general idea of disaster and emergency medicine. The educational programs motivated healthcare professionals. Simulated disaster drills adapted to the local situations will be performed.

Keywords: disaster; earthquake; layperson; preparedness; tsunami
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(H78) How Well Are Healthcare Institutions Prepared for Disasters?

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Introduction: The better healthcare providers are educated and trained and the more they practice their skills, the more they are prepared when disaster strikes. However, little is known about the current state of preparedness for managing disasters among healthcare providers.

Methods: Representatives of all healthcare institutions in the Netherlands (hospitals, accident and emergency departments, ambulance services, regional health authorities and their branch organizations) were interviewed about the preparedness of their institutions.

Results: The response rate was 75% (n = 211). Nearly half of them were educated in specific skills for managing disasters and 77% practiced those skills at least once in the past 12 months. Most exercises were internal and not mono- or multidisciplinary; were tabletop and not real-life; and concerned “flash crisis” and not pandemics, floods, or chemical incidents. The majority of respondents (84%) recommended that the authorities standardize tasks and functions because the current state of preparedness is too informal and lacks uniformity and quality. The bottlenecks mentioned most frequently were lack of resources, capacity, commitment, and mutual communication.

Conclusions: Ambulance services were better prepared than the other institutions. Some years every hospital is obliged to implement a regional hospital emergency management plan. This obligation gave an important impetus for better preparation, but there still is a need for standardization. Besides, there is too much focus on “common” disasters, and there still is a lack of urgency among most healthcare providers.

Keywords: capacity building; disaster; education; healthcare institutions; Netherlands; preparedness

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(H79) Utility of and Risks Associated with the Use of Spontaneous Disaster Volunteers in Disaster Response

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Introduction: Spontaneous volunteers (SVs) are ubiquitous after any disaster and many organizations use them.

Their limited training or experience can create a hazardous situation for both the SVs and the organization. This study assesses organizations’ experiences with SVs during a disaster response, how they were integrated into the agency’s infrastructure, and the perceived value of the volunteer force to their past responses.

Methods: A telephone survey of organizations affiliated with the National Volunteer Organizations Assisting with Disasters (NVOAD) was conducted. The survey assessed SV training, management, and liability issues.

Results: Twenty-three of the 49 (47%) organizations responded, of which, 78% encountered SVs during a response. Of these, 77% used SVs in the field. Many (67%) felt that SVs were useful. When managing SVs, only one organization always credentialed them, and 33% sometimes credentialed. Fifty-six percent never perform background checks. Only 22% conducted post-event performance evaluations of SVs. Half provided “just-in-time” training for SVs prior to assignment and 22% provided health or workers compensation benefits. One organization reported the death of an SV, while 39% reported injuries. Twenty-eight percent accepted legal liability for the actions of SVs and 11% were sued because of SV actions. One organization was sued by an SV.

Conclusions: The use of SVs is widespread, but organizations are not necessarily structured to incorporate them effectively. There are significant health and legal risks associated with the use of SVs. More structured efforts to integrate SVs are critical to safe and effective disaster response.

Keywords: capacity building; credential; disaster response; preparedness; risks; spontaneous volunteers; task-sharing

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(H80) International Non-Governmental Organizations’ Roles in Disaster Preparedness in Developing Countries

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International non-governmental organizations’ (INGO) resources and global expertise can strengthen disaster preparedness in developing countries. Collaborating with local governments and hospitals, medical professionals, and military, INGOs can leverage technical and financial resources for training courses, disaster drill exercises, preparedness evaluation, material support, and educational tools. Sustainable preparedness is promoted using the partnership model.

AmeriCares, a disaster response INGO, supported three disaster drills in Sri Lanka and India in 2007–2008, along with a Trauma System and Emergency Medicine project. The INGO collaborated with the World Health Organization, American universities and hospitals, local governments, hospitals and the Ministry of Health, military, non-governmental organizations, the Red Cross, and private organizations. Mannequins and equipment were