

it includes compiling factual data to communicate the situation to an anxious public. For public health organizations, it includes collecting communicable disease data from the field. For hospitals, it includes the sharing of vaccination rates to help them make resource management decisions.

Within a few weeks, >60 organizations worldwide joined the network, including state, federal, and international public health organizations. Other disciplines also joined the network including emergency management, law enforcement, energy regulation, transportation, finance, and legislative bodies, providing them with situational awareness and a way to communicate in real-time.

Keywords: global; H1N1; influenza; information; network

Prehosp Disaster Med

SOGRO—A New Way of Providing Faster Information in Case of a Mass-Casualty Incident

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Introduction: Triage outdoors at the scene of a mass-casualty incident (MCI) still incurs a lot of problems. One of these is that patient information, especially the status of the patient, arrives too late at the dispatch center and/or hospital. Also, the amount of medical information can be either too much or not enough.

Thus, SOGRO, funded by the federal Ministry of Education and research, attempted to eliminate both of these problems by using modern technology (RFID and PDA) to transfer the first data immediately after the triaging of the patient has been completed.

Methods: Using a rugged PDA with a newly developed program, the result of the triage (status of triage, gender, adult or child, and a photo of the face) are transferred on to a coloured (red, yellow or green) wristband that holds an RFID-chip, so that these data stay with the patient. At the same time, these data also are sent to a server defined by the location (dispatch, hospital, etc.).

If medical treatment is necessary, infusions and/or medication and, if needed, physiological data can be stored on the patient's wristband. Once the patient is ready for transportation, the ID of the ambulance car also is stored, and the data are transferred to the authorities.

Conclusions: The benefits of such a system are:

1. The status of the patient is available immediately after the first contact;
2. Only necessary medical data are stored on the wristband. Ventilatory and pulse rates taken about a half hour ago are unnecessary for the treatment at the hospital; and
3. Patients can be tracked from the scene of the MCI until arrival at the hospital—no patients get lost.

In this project, unmanned aerial vehicles will be used to follow an aerial overview of the disaster area.

Keywords: communication; data sharing; mass-casualty incidents; technology; transport

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Designated Tools for Management and Control of Medical Information during Mass-Casualty Toxicological Incidents

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The unique challenge of mass-casualty toxicological incidents (MCTIs) is the fact that various poisons can be the source of injury. Identifying the specific toxic substance is of cardinal importance. Without this identification, there is a gap in the precise medical response, the protection and decontamination procedures, and the proper, on-scene, operational risk assessment. Most first responders and hospital personnel lack relevant experience and specific and sufficient education in clinical toxicology. Unlike trauma events, MCTIs are rare and can involve several clinical scenarios. For each toxidrome, different protocol and antidotes can be advised. In Israel, there is widespread use of various designated tools to overcome the disparity in medical knowledge during the immediate response to a MCTI. First responders on the scene carry cards and control schemes of detailed clinical algorithms. In hospitals, there are designated notebooks and dossiers. These tools efficiently and clearly present needed information regarding the clinical identification of the toxic exposure and the proper medical response during a suspected or definite MCTI. The tools are updated regularly and are optimized for each working environment. They are integrated into emergency drills, and enable the capability of delivering fast and relevant information to medical personnel, helping them to handle any MCTI. It is advised that such tools be adopted in any MCTI preparedness plan.

Keywords: control; information; management; mass-casualty incident; tool; toxicology

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ALARM: Telemedical Concepts and Innovative Information Technology Solutions to Support Emergency Workers and Services during Responses to Large-Scale Emergencies

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Large-scale emergencies involving large numbers of casualties often lack the timely and precise information needed for adequate emergency response. Medical and logistical processes receive insufficient support in terms of information technology (IT), which delays individual medical care and increases the potential for spreading panic.

The ALARM project is funded by the Federal Ministry of Education and Research and targets the development of an integrated service platform that ensures and accelerates communication and the flow of information and data. Within the project, a modular platform that enables seamless e-documentation, identification and dynamic resource management of rescue materials and equipment to direct telemedical care services as monitoring and instructions will be developed.

In the first step, an overview of prevailing processes, applied technologies and perceived limitations were pre-

pared. Therefore, a method mix was chosen. Narrative expert interviews were complemented by structured observations of large-scale trainings and a thorough literature review. Based on the results, a general scenario displaying current procedures, structures, and technical equipment was deducted.

In Germany, the triage process is paper-based, which has several limitations: easy removability of tags, poor usability during foul weather, unnoticed deterioration of patient conditions, and incomplete information about prior medication at the receiving hospital. Furthermore, hospitals do not have sufficient knowledge about the medical state of arriving patients. On-scene rescue workers lack an overview, whether additionally ordered resources will be available and when they can be expected. Currently, IT-support equipment is not used in routine practice, often, the systems are described as being too complex, difficult to use, and expensive.

The next steps include a summary of key questions using questionnaires combining open-ended, dichotomous, and multichotomous questions for structured interviews. Results from the questionnaires will provide a broad concept of the integrated service platform. Panic prevention plans and process optimizations will be described.

Keywords: communication; emergency; information technology; response; support; telemedicine

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All-Hazards Approach

Regional Evacuation of Neonatal and Pediatric Patient Populations—Mutual Aid Planning

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In 2009, the Public Health Department of Seattle and King County, Washington USA, embarked on a project to plan for the evacuation of the neonatal and pediatric patient population due to an isolated, regional, or catastrophic disaster. The planning included identifying the precise levels of care provided across multiple states and British Columbia, Canada, and methods for the transport of High-Frequency Oscillator Ventilator Patients in a Level-III Neonatal Intensive Care Unit to special Pediatric Intensive Care Unit. Planning included patient distribution strategies using a Health and Medical Area Command in the event of a failure of multiple area hospitals, and focusing on turning certain acute care hospitals with current pediatric capabilities into Pediatric Disaster Surge Hospitals. A review of equipment, staffing, transportation resources, suppliers/vendors, and other special support entities was conducted with the resulting information being managed through the Health and Medical Area Command.

Keywords: cooperation; evacuation; neonatal; pediatric; planning; preparedness

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Medical Student Team for Disaster Management in the Hospital

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Introduction: During a disaster, a hospital faces a difficult situation in which the needs are much greater than the resources available. The goal of this study was to develop an organized “ready to intervene group” consisting of medical students in order to support the clinical staff in non-health activities during an emergency. The aim was to prepare the students to be used especially in university hospitals such as the AOU Careggi.

Methods: The first step was to train students to the multi-disciplinary aspects that disaster management requires. The curriculum addressed aspects of health, technology (chemical hazards, analysis of emergency plans and practical tests such as fire extinguishing) and a psychosocial issues concerning the approach to a patient and the analysis of language-related problems within a health facility. This last step has provided the organizational process for the participation of volunteer students.

Results: A support team including all of the management protocols concerning the procedures for recruitment, alerting, and activation was developed.

The team’s tasks are:

1. Approach to the patient (patients with sensory and/or cognitive deficits);
2. Evacuation techniques for people with motor and/or cognitive deficits; and
3. Logistical support (individuation and transport from the other departments or life support and positioning them in pre-determined collection areas).

Conclusions: The development of the team permits an increase of the resources available in hospitals with trained personnel who are familiar with the environment and the structure, and represent a population that always is present in the hospital. Further developments include the official insertion of the team in the AOU Careggi Hospital emergency plan in order to be formally used and tested using drills.

Keywords: disaster; disaster medicine; hospital; medicine

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Excessive Formaldehyde Exposure to Displaced Persons Living in Temporary Housing Units following Hurricane Katrina

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Following the destruction caused by Hurricane Katrina that struck the Gulf Coast of the United States on 28-29 August 2005, the US Federal Emergency Management Agency (FEMA) provided temporary housing units (THUs) to thousands of displaced persons (DPs). Most THUs were recreational vehicles (RVs), not designed for housing DPs for more than a few weeks. Many DPs occupied THUs for 1–2 years or longer.

During occupancy, DPs complained of poor air quality and odors, along with the development of several symptoms