

the principles of management and interaction between involved medical staff. The information system uses LAN technique to collect information at the scene of accident and Mobitex® and the Internet to send the information to management groups and/or emergency wards. A prerequisite of an information system in a major incident is that the principles of how a situation like this should be managed is well-known and accepted in the organization, and that the technique used is the same as that used in the daily routine. This video describes how the information system supports the medical management in a situation with several injured people. You can follow how the first ambulance on-scene reports digitally to the incident management, and how this information, combined with information of available resources, is used to ensure that the patients are conveyed to the most appropriate medical facility. The video also presents how IS SWEDE can be used during a major incident, to spread information within the Medicare system, and how patient information can be sent from ambulances on their way to a hospital.

Keywords: ambulance; doctrine; incident command; information systems; interactions; LAN; management; medical; report; staff, medical; SWEDE; technique

Prehosp Disast Med 2002;17(s2):s36-37.

Computer-Aided Dispatch Systems and Their Application in Coordination and Control Situations

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This presentation will demonstrate the technologies already in place within the New South Wales (NSW) Ambulance Service, and will highlight some examples in which the technologies offer so much in the way of control and coordination.

Future emergency medical services (EMS) systems must be tested and proven in their intended field of operations. The systems for EMS agencies must have the ability to use closely aligned technologies such as Geographical Information Systems, automatic resource locating using satellite communications, and emergency incident messaging using mobile data and wireless personal devices. Together, these technologies can prove to be effective and efficient in resource allocation and deployment. For instance, geographical mapping systems can plot available agency resources, and, if data sharing is available, also can display inter-agency resources. This ability ensures that the right response is allocated in the right time frame — no over-resourcing or under-resourcing occurs!

With computer aided dispatch systems and automatic vehicle locating — emergency service managers and disaster planners can plan more efficiently. A greater visual analysis assists the manager or planner in deploying resources to the incident. The computer-aided dispatch environment offers the agency the ability to see the “bigger picture”. Emerging technologies, such as personal device assistants (PDAs), now enable the field supervisor/manager with the ability to visualize his or her resources. It enables two-way communication from the control centre. With greater planning ability, these new technologies offer the disaster situation greater control and coordination.

Keywords: automatic resource locating; communications; computer-aided dispatch; data sharing; emergency medical services (EMS); geographic information system (GIS); responses; technology

Prehosp Disast Med 2002;17(s2):s37.

Major Incident Command and Control: “Communications: The Key to an Effective Response”

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In recent years, Bedfordshire and Hertfordshire Ambulance Service, in line with most UK medical agencies, has managed numerous Major Incidents involving significant loss of life. Resulting studies have indicated: (1) Communications at the incident site and between there and Emergency Dispatch centre; and (2) Emergency Dispatch to Strategic (Gold) Control, have been critical to the effective management of the incident.

For example, following the Potters Bar train derailment in May 2002, the Service reviewed its communication links and moved to update incident communications as a priority. Therefore, effective communications, which regularly are used and tested, are integral to sound disaster management.

The UK Government recommendations indicate that all emergency services and supporting agencies must have robust communication links, and, indeed, the UK now is introducing a single national radio system for emergency services, which will be inter-operable. Following the 9/11 terrorist attacks, weight and urgency have been given to communications between agencies following significant shortfalls identified after the event. Therefore, all medical agencies responding to the disasters should ensure that:

1. All personnel have hand-held communication systems capable of contacting each other and central control. (These should be systems in regular use);
2. Central control has robust links with other agencies that are regularly tested;
3. Identification of all medical personnel on site is essential.

These recommendations, while appearing simple and understated, if not acted upon (and maintained in a high state of readiness), potentially will cause increased loss of life and increased potential for associated litigious actions.

Keywords: communications; control, central; disasters; dispatch; identification; links; litigation; readiness

Prehosp Disast Med 2002;17(s2):s37.

Using Self-Made Software for Managing a Medical Post

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Introduction: Using data processing in the forward medical post helps to save information and time, but purchasing such specific software may seem costly for hospital chief buyers, especially in areas in which disasters are extremely rare. Therefore, we created and tested our own forward medical post (FMP) program.

Methods: This FMP program is of a customer-server type, using by Access, in a computer permanently settled in a

medical command vehicle, and linked via an internal network to laptops inside the FMP as well as other commanding vehicles (fire brigade, police,...). Using pull-down menus (WHO diagnosis, HAZMAT events, carriers list, conditioning list,...), requirements for keyboarding are minimal. A few mouse clicks generate a patient's file, position it in the FMP healthcare chain, and initialize automatic timing and data fields that then appear at each stage, as soon as required data of the previous entries are captured. Detailed reports can be printed anytime or transmitted by modem to the regulation centre.

The FMP program has been tested prospectively during the five last small scale (<50 casualties) disaster simulations. In each case, three new users received a 1-hour, field training on the computer before the drill started. All exercises were conducted with FMP specific requirements: short staff, multiplicity of tasks, priority to healthcare.

Results: Except for an incidental generator breakdown that led to use of a failure procedure, the FMP program has been able to deal with small-scale disaster just-in-time necessities, and to provide complete follow-up of any patient from admission to final destination, along with instantaneous reports.

Conclusions: Using an application of a commonly used software package, might be a valuable alternative for anyone with a low credit limit who intends to computerize an FMP.

Keywords: computer; development; disasters; forward medical post (FMP); program; simulations; software

Prehosp Disast Med 2002;17(s2):s37-38.

The Use of Incident Command System for Public Health Disasters

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The incident command system (ICS) has been adopted by many agencies in the uniformed services and business sectors in the United States of America (USA). This system has been adapted for use in the hospital sector and commonly is referred to as the Hospital Emergency Incident Command system (HEICS). Until now, public health has not adopted a uniform system for disaster management.

As the threat of terrorism continues to escalate, public health increasingly will be called upon to be a partner in disaster response. Utilization of a disaster response model that interfaces well with other responding agencies will serve to improve interagency communication and facilitate the overall disaster response. A public health model of ICS will assist in this endeavor.

This paper presents work (done at the Columbia University Mailman School of Public Health, Center for Public Health Preparedness) on adapting the ICS and HEICS emergency management systems to public health disaster planning and response. Utilizing the existing ICS and HEICS framework and nomenclature, a model for public health ICS (PHICS) will be presented.

Keywords: disaster; Hospital Emergency Incident Command System (HEICS); Incident Command System (ICS); public health; responses

Prehosp Disast Med 2002;17(s2):s38.

Frontline — Perspectives from a Disaster Medical Team Member

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Every disaster is different and affords us the opportunity to learn and hopefully, to improve performance. New South Wales (NSW) Health has deployed disaster medical teams to numerous disasters over the years, and the involvement of health in disasters is increasing. The scope of the disasters in which disaster medical teams are deployed also is increasing. Feedback from personnel involved in disasters always is important for refining future disaster responses.

This presentation outlines some disasters that the author has been involved with as a disaster medical team member. These include the Hawkesbury train smash in 1989, the Thredbo landslide in 1997, and the NSW 2001 Christmas Bushfires. They are used to discuss various aspects of response management, the role of disaster teams in various settings, and the implications for managers in the health system. The discussion then centres on the similarities and the differences between each disaster response, specifically from an 'on the ground perspective'.

The primary role of communication—both vertical and horizontal—is discussed highlighting some of the problems and lessons learnt. The issue of practicalities of mounting a disaster medical team at short notice and for a prolonged deployment also is discussed. Lastly, the psychological effects that a disaster response not only has on team members, but more importantly, on those health employees not directly involved is discussed.

Keywords: communication; disaster medical team; disasters; feedback; managers; response

Prehosp Disast Med 2002;17(s2):s38.

Medical Rescue after Earthquakes

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In China, earthquakes are a frequent occurrence, comprising about 30% of all earthquakes worldwide. Over the last century, there were more than 600 earthquakes in China; nearly 100 of those were a magnitude of 7.0 or above. With its large population and relatively poor quality of building construction, China experiences high death and disability rates due to earthquakes. We must pay more attention to such a serious situation; therefore, earthquake rescue should be an important medical undertaking.

This presentation covers earthquake classification and severity, preparedness of medical teams, data collection and reporting, rescue and treatment of injured survivors, physical and psychological trauma, and prevention of disease outbreaks following an earthquake.

Keywords: China, earthquake

Prehosp Disast Med 2002;17(s2):s38.

Medical Rescue for Victims of Earthquakes

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Lying between two great earthquake zones, China is a