

Management Sub-Plan. The unique skills and role of GPs, as well as actual and potential issues will be considered.

**Keywords:** Australia; emergency; fire; general practitioners; response; territory

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### Designing a Scalable, Flexible, and Possibly Mobile Centre of Emergency Operations by Making Use of Recreational Parks and Extensive and Innovative Use of Ordinary, Steel, Shipping Containers

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The world, especially Hong Kong, suddenly faced the onslaught of the severe acute respiratory syndrome (SARS). Hong Kong encountered 299 deaths, financial and economic costs in the billions, and political turmoil.

Few countries, not even the United States, establish Emergency Operations Centres because it seems to be a waste of resources when nothing happens, since there are not many disasters and no one can predict when they may strike.

The Emergency Operations Centre is a flexible project, which attempts to make use of recreational camps in Hong Kong. This project is attempting to involve, mobilize, and equip these camps for emergency use in advance of the occurrence of an event. Ordinary technology cannot cope with the sudden onslaught of diseases, such as SARS.

The idea is to build a hospital near the campsites, which could be mobilized or activated within 24 hours. This hospital is maintained with the assistance of the management of the campsite, such as maintenance of lighting, heating, air-conditioning, computer possibilities, and other infrastructures. It will be maintained during “peaceful times” by a skeleton staff. The emergency team, which does not meet on a daily basis, will be organized and trained for mobilization on short notice.

The Emergency Operations Centre will be a flexible project which attempts to make use of recreational camps where the adjacent lands will be used for temporary storage of general purpose storage containers or special purpose containers. These containers will be stacked just like they are in a container port where cranes will be installed for stacking and moving the containers. These containers (always action ready) will be moved to designated areas to organize as field hospitals. If needed elsewhere, these containers can be shipped on container ships to remote areas for use in emergency relief.

All of them are stored remotely yet they are readily accessible. This paper will examine the extensive use of containers as building blocks.

**Keywords:** containers; emergency operation centre; flexibility; hospital; Hong Kong; recreation camp; severe acute respiratory syndrome (SARS)

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### Efficiency Analysis of Medical Support of Injured Patients during an Act of Terrorism with Hostage-Taking

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Recently, the establishment of the system for the provision of medical support during acts of terrorism has become one of the most important developments in Disaster Medicine, especially in Russia, where the frequency of such acts has more than doubled. This analysis of the medical support provided to >1,000 hostages in the concert hall is important for international organizations, participating in the provision of medical relief associated with acts of terrorism. Because of working conditions, such as the likelihood of the situation changing including the high probability of an explosion of the building, the psychological stress on the injured, and the use of special means during the event, the system used for the rendering of medical care consisted of two stages.

During the Prehospital Stage, rescuers and representatives of special services used antidotes and quickly carried the injured to the ground in front of the building where medical triage was conducted with the help of the Medical Distribution Team. The medical triage was conducted according to the following main categories: (1) those who needed emergency medical care (acute respiratory and cardio-vascular insufficiency, different levels of shock); (2) those who were transported by ambulance cars accompanied by a medical team; (3) those who didn't need emergency medical care and were evacuated by special buses accompanied by medical personnel; and (4) the dead who were sent to medico-legal expertise departments at the nearest medical institutions. These medical institutions were located no more than 20–25 minutes from the concert hall (Hospital of War Invalids with 300 beds, clinical hospital N13 with 1,200 beds).

Then, the injured patients were categorized upon their delivery to the Admission Departments of the receiving medical institutions. These categories were: (1) those who needed treatment in the resuscitation department (artificial pulmonary ventilation, complex anti-shock therapy); (2) those who needed intensive medical care (intensive care units); and (3) those who were sent to specialized hospitals departments for planned therapy and dynamic monitoring.

Overall, a total of 765 injured patients were delivered to the medical institutions for in-patient treatment, including 16.3% (128 patients) who were delivered to the Resuscitation Departments and Intensive Care Units. Skilled doctors and resuscitators of the leading medical institutions of Moscow supplemented the staffs of the resuscitation and intensive care units. This helped in the provision of efficient, specialized medical assistance.

Among the patients delivered to the medical institutions, only seven patients died during the treatment. More than 60% of the injured were discharged on the 6th or 7th days after the event, and the average treatment lasted 13–14 days.

Every injured patient during the act of terrorism was sent to outpatient departments and sanatoriums for medical-psychological rehabilitation.

Analysis of the results show a high degree of efficiency of the medical support of the injured, and constitutes a recommendation for the development of international systems for acts of terrorism in other countries.

**Keywords:** emergency department (ED); injured; response; terrorism; transport; triage

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## Poster Presentations

### Kicking and Screaming: How to Bring Your Hospital Command Center into the 21st Century

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If you enter a hospital command center during a disaster, you are likely to see disaster manuals scattered about, white boards and “Post-it” Notes being used to record data, and telephones and fax machines as the mainstays of communication. Comprehensive, crisis-management software has been available to emergency managers in regional command centers for several years now, but its functionality in hospitals has not been well defined.

A university hospital in Washington, DC, has been working with a software company to modify its regional disaster management software for use in hospitals. Information technology can be utilized to improve access to the hospital’s emergency management plan, hospital emergency incident command system (HEICS) job-action sheets, and many aspects of response, such as mass communications, resource and asset management, accountability, and after-action reports. Furthermore, by employing XML interfaces, hospital-based emergency management programs can be collaboratively integrated with existing regional response programs.

**Keywords:** collaboration; communication; hospital emergency incident command system (HEICS); hospitals; plan; information technology; management; software

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### A Decision Support System for Clinical Practice Guideline Implementation in Disasters

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Implementation of clinical practice guidelines in disasters not only has the benefit of improving the quality of care, but also has the special merit of reducing the need for trained personnel, unique to the disaster situation. This article presents a new application specially designed for the purpose of providing doctors, emergency technicians, and laypersons with decision support in mass-casualty settings, both in the field and hospital. The system enables emergency care providers to perform at a level that normally needs special training. For example, triage, which is a trained technician’s duty, can be done by any literate civil-

ian through this system. In addition, medical supplies will be used more reasonably by administering them in accordance with a predefined evidence-based guideline adapted to shortage situations.

The new method for computerizing the practice guidelines has a very simple and flexible structure and interface to be distinguished from other well-known models. Different settings are designed for physicians and other users according to their level of training and responsibility in a disaster. The application guides the user through a set of steps, and is provided in each step with recommendations on what must be done for the casualty at that point. These recommendations appear as brief but explicit texts and occasional pictures to clarify the inherent ambiguity of guidelines. The user the is asked a question about the patient’s condition. The answer will lead the user to a new page with an appropriate management plan suggested and new questions put forward successively. Eligibility checking will be partly on the side of the user, who can enter the guideline at any point and move back or forward if needed.

The system tracks each user’s path through a guideline to create a record of encounters for future evaluation and reference. This system is applicable on a wide variety of platforms, being compatible with almost any Internet browser, such as Microsoft Internet Explorer or Netscape Navigator. The interface is an HTML-based Web page, which can be accessed via the Internet, stand-alone personal computers, handheld computers, or even new-generation cell phones. A trial Web-based version of the system being developed can be viewed at [www.disasterdss.org](http://www.disasterdss.org).

This new approach to guideline implementation is in the very beginning stages, and a complete, fully developed system will involve systematic efforts by many specialists and relief agencies. The system merits the test of time, and field trials, in a full-scale disaster, will reveal its drawbacks and applicability obstacles to be addressed in future revisions.

**Keywords:** application; computer; evidence-based; Iran; Internet; telemedicine; triage

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### Accuracy of the Primary Triage Process after the Volendam Fire Disaster

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**Introduction:** In a major event, correct triage is crucial to emergency treatment and transport priority.

**Objectives:** The aim of the study was to evaluate the accuracy of the primary triage process following the major fire incident on New Year’s Eve in Volendam, Netherlands and its impact on immediate medical treatment and transport priority.

**Methods:** On-site and emergency department (ED) data regarding total body surface area (TBSA) burned and the incidence of inhalation injury were compared with the