Methods: Using epidemiologically and empirically derived practice assumptions, the Australasian Surge Strategy Working Group developed its recommendations for clinical surge management.
Results: These recommendations detail 22 specific actions potentially available to any emergency physician working in the context of surge. The strategies have been compiled according to the domains of space, staff, supplies, and system operation. Underlying these actions, the Working Group provides detailed guidance on surge recognition, patient flow through the emergency department, clinical goals and patient care practices during surge, and triage in surge.
Conclusions: Issues that merit future focused research include: (1) the measurement of surge capacity; (2) situational constraints to strategy implementation; (3) validation of surge strategies in combination; and (4) measurement of strategy impacts on throughput, cost, and quality of care.
Keywords: Australasian Surge Strategy Working Group; emergency department; hospital; preparedness; surge capacity
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Creating Hospital Surge Capacity: Hospital Emergency Support Functions and Re-Allocation of Resources

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Introduction: Hospitals in the United States have been tasked by federal funding mandates and accreditation agencies to plan for accommodating large numbers of patients by increasing their in-house bed surge capacity. No clear means have been established to determine staff suitably to care for this increased patient load. To date, plans nationwide have identified volunteerism and emergency credentialing systems as possible solutions to the staffing issue. However, no evidence has been shown that this approach will address the staffing needs in a large-scale surge incident appropriately. The purpose of the Hospital Emergency Support Functions (HESF) Project is to identify staff capabilities and capacity available throughout the hospital that might be reassigned to both clinical and non-clinical services during an event.
Methods: Adapting the Delphi method, a mono-variable exploration technique for technology forecasting, a panel of experts that included hospital clinical directors, decision-makers and emergency managers was selected to participate in a consensus process.
Results: Hospital clinical functions pivotal to surge capacity were reviewed. Resources supporting non-critical hospital functions may be diverted to meet surge demands as defined by the HESFs. Provisions may also be made for just in time and cross training of employees, healthcare providers and volunteers to expand the workforce available to support the critical HESFs.
Conclusions: Identification of HESFs, staff training and reassignment of resources may help close gaps in meeting surge demands. This approach is generalizable, adherent to state/federal/provincial mandates, and is intended for utilization and customization for emergency management planning.
Keywords: capacity building; hospitals; Hospital Emergency Support Functions; patient load; preparedness; resources
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Consensus and Tools Needed for Evaluation of Emergency Management Capabilities

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Objective: The objective of this study was to determine whether a core set of healthcare emergency management capabilities and a comprehensive and rigorous approach to their evaluation exists.
Methods: The healthcare emergency management capabilities and evaluation approaches used by the Veterans Health Administration, The Joint Commission, the Institute of Medicine Metropolitan Medical Response System Committee, the Department of Homeland Security, and the Department of Health and Human Services were compared. Tools used to measure hospital performance based on written plans or exercises also were reviewed to determine their utility.
Results: Despite differences in the conceptualization of healthcare emergency management, there is considerable overlap regarding major capabilities and capability-specific elements among the agencies. At least three out of the five agencies identified occupant safety, continuity of operations, medical surge, communication, management of volunteers, management of resources, and support to external entities as major capabilities. Most often, the differences among agencies were related to whether a capability should be a major one or a capability-specific element (e.g., decontamination). All of the agencies rely on multiple indicators and data sources to evaluate emergency management capabilities. However, few performance-based tools have been developed to evaluate the quality of healthcare emergency management capabilities and none have been tested adequately for their reliability and validity.
Conclusions: Consensus on a healthcare emergency management framework must be reached so that efforts can be focused on improving the ability to rigorously evaluate and improve hospital emergency management capabilities for disasters.
Keywords: capacity building; emergency management; evaluation; preparedness; tool
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Field Hospital and Clinics in Disaster Response: A Red Cross Model

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Health Emergency Response Units (ERUs) were pioneered >12 years ago by the Geneva-based International

Federation of Red Cross and Red Crescent Societies (IFRC) to provide standardized and rapid international disaster response. Health ERUs, essentially tented field hospitals and clinics, are deployed with specialized teams and basic medical/infrastructural material from various capitals and represent a Red Cross model to provide surge medical capacity. Other types of ERUs also were developed and work in complimentary fashion (water, sanitation, logistics, etc.) Experience demonstrates that the arrival of ERUs, typically after seven days after the disaster, implies that the medical teams are required to cope with primarily non-disaster related trauma. Emergency Response Units are designed to stay beyond the acute phase and offer a general medical service. They are configured with basic levels of medical devices offering a locally appropriate level of care.

Successful deployments will need to increasingly utilize specially trained multi-national teams and personnel from developing nations. Moreover, health ERU components are being downsized, made more mobile, and can be more rapidly deployed. The Canadian, Australian, and Norwegian Red Crosses are currently developing a module to focus on disease prevention and health promotion measures. More than 90 Canadian and 200 Norwegian medical personnel are trained and on standby for ERU missions.

Keywords: disaster managment ;education; non-government organizations; public health; roles
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Hospital Emergency Manager's Assessment for the Development of a Computerized Disaster Information Management System

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Introduction: Hospitals must respond to many emergent incidents. They are required to maintain extensive plans and train for disasters. The current paper systems in use can be improved markedly by the use of computerized decision aids. In preparation for designing a computerized disaster information system, emergency planners were surveyed about their preparedness status and needs.

Methods: Colorado hospital emergency management planners were contacted and asked to complete a commercial computerized survey tool.

Results: Surveys were obtained from >50% of hospitals. Most hospitals use a slightly modified national Incident Command System (ICS) template. Networked computers were widely available throughout hospitals. Likely disaster responders were comfortable with using computers. Emergency preparedness planners rated the ability to have user-configured organizational structures (ICS charts) and definable task lists (job action sheets) in a computerized system highly. The ability of a computerized management system to communicate between positions, the capability of logging events to generate reports, and outside communications were desirable. The ability to operate a disaster computer system in different functional modes of disaster response including alternate care sites and evacuation was important.

Conclusions: Adequate hospital infrastructure to support a computerized disaster information management system exists. There is strong interest in a computerized disaster information management system among intended users.

Keywords: assessment; computer information management system; disaster management; emergency manager; hospital; information management
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Preparedness and Capacity Building in the Community

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Emergency preparedness and response goes down to the individual members and families at the local level. In one of the electoral constituencies in Singapore with about 40,000 households, emergency preparedness, training, and initial response is being implemented and executed.

Having a Constituency Emergency Preparedness and Response Programme is important. The development must involve the consultation of stakeholders to ensure all inputs are considered and to make the response as comprehensive as possible. A coordinating body is essential to oversee the plans and conduct meetings with all potential partners and authorities. House and estate visits also are important to reach out to every resident to explain and promote the idea and concept. The purpose of the Constituency Emergency Preparedness and Response Programme is as follows:

1. Specify the missions, roles, and tasks of the Emergency Preparedness Group and residents, during emergencies describing in a conceptual manner how these missions will be achieved; and
2. Provide the documentation to facilitate exercises and training activities to prepare emergency units in responding to emergencies.

With this program, a high percentage of the residents in the various areas of the constituency have been mobilized to participate in training and exercises. In fact, in a real crisis situation such as a dengue outbreak, the plan works extremely well when working with residents as well as all partners and stakeholders.

The Incident Commander/Emergency Preparedness Group Chairman or Senior Constituency Manager will have the authority to activate the plan.

This presentation will share how the program can be executed at the constituency-level amongst the public.

Keywords: capacity building; community; education; preparedness; response
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