

**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