

Oral Presentations—Theme 12: Preparedness

Session 1: Safe Hospitals 1

Chairs: TBA

Quality Indicators to Self-Assess the Level of Disaster Preparedness

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Introduction: It impossible to predict when or where a disaster will happen next, or what its cause will be. This presentation describes an instrument that was developed to allow hospitals to self-assess their level of disaster preparedness and to prioritize areas for improvement for future disaster response.

Methods: An instrument of quality indicators of preparedness was developed from a telephone survey (n = 134) and seven focus group discussions with experts in emergency and disaster management. The resulted initial long list of quality indicators of preparedness was then consolidated and organized by consulting experts and representatives of umbrella organizations. The resulting indicators comprised two of the three quality dimensions as defined by Donabedian:

1. Structure—Human and material resources, procedures; and
2. Process—Education, training, practice, and cooperation within the hospital and with other disciplines.

The quality indicators were evaluated as to their content validity, and usefulness in a 19-hospital pilot study conducted in the fall of 2006 in the Netherlands.

Results: The pilot test resulted in further improvements of the instrument. Most of the participants acknowledged the usefulness of the instrument for self-assessment of their current level of disaster preparedness. It also was determined to be useful for prioritizing areas for improvement. Respondents supported repeated use of the instrument to assess any progress in preparedness levels.

Conclusions: The current instrument consists mainly of generic quality indicators of preparedness. The instrument could be extended and modified to assess specific indicators disaster preparedness.

Keywords: hospital; instrument; preparedness; quality indicators; self-assessment

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Electrical Blackouts in Hospitals and the Need for Reassessment of the Electrical Infrastructure and More Powerful Standby Generation

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Background: Most modern hospitals have standby electrical generators, but there are no national guidelines regarding the capacity and duration of backup power generation.

In light of current medical technology that requires increased power consumption, a national review of all healthcare facilities and their methods of generating standby electricity should be conducted.

Discussion: Due to problems with power grids, many hospitals in Europe and the United States recently have experienced power outages. Patient safety in a hospital is highly dependent on a functioning power supply. Areas such as operating rooms, intensive care units, and diagnostic areas use electrical power for operation essential medical devices around-the-clock. Technologic advances have created new diagnostic and therapeutic devices that continue to consume energy. During disasters, hospitals need a reliable energy supply in order to operate devices such as computed tomography machines or ventilators, which are essential for the care of critically ill patients. The electrical infrastructure of hospitals, including standby generation, often is antiquated and has not kept pace with the latest technical developments. A review of the essential electrical equipment and maximum emergency energy consumption of every hospital is needed. The electrical infrastructure, including hospital wiring should be reassessed on a national basis. The standby electrical generation of each hospital must be adjusted and expanded to meet the immediate and future needs during power grid failures.

Conclusion: National technical standards should be developed and implemented for the electrical infrastructure and standby generation of electricity in all hospitals and healthcare.

Keywords: blackout; electricity; energy; power; standby generation
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Benchmarking Hospitals for Hurricane Evacuation

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The 2005 hurricane season on the Gulf Coast of the United States underscored how quickly hospitals can shift from being care providers during a disaster to being victims in need of assistance themselves. Four weeks after Hurricane Katrina, seven system hospitals in southeast Louisiana and southwest Texas that were serving the population surge of the New Orleans patients and evacuees, were either partially or fully evacuated as a result of Hurricane Rita. This study builds on the Northridge hospital benchmarking tool for evacuations during an earthquake (Schultz, *et al* 2005), and enhances its design for benchmarking hospitals for hurricane evacuation. Study areas include: (1) hospital demographics; (2) disaster plan characteristics; (3) planning lessons for individual hospitals; (4) hospital decision making and incident command; (5) movement of patients within the facility; and (6) movement of patients to other facilities. Lessons learned from multiple communities across the region will be discussed in the results, and key planning areas that strengthen hospital evacuation planning will be identified.

Keywords: benchmarking; evacuation; hospital; Hurricane Katrina; Hurricane Rita

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