

potential only can be realized fully if implementations are based on a solid understanding of the key factors that determine the usefulness of such systems.

Objective: To provide a framework for analyzing and evaluating the key factors involved in the design of ICT-based systems for coordination and control of disaster response.

Methods: A prototype system for gathering and sharing emergency medical information was implemented using hand-held computers and a wireless network. Based on experiences with this system, a framework was developed for the design of ICT systems for coordination and control, providing: (1) definition of indicators of the effectiveness of information sharing enabled by a technological solution; (2) classification of the types of information to be shared during disaster response; (3) classification of mechanisms for information sharing (including traditional mechanisms); and (4) assessments of which methods are best suited to which types of information.

Basic level, ICT-based information-sharing ensures that individual data items are delivered to everyone involved, but does not process the data into information. More advanced systems can collate information (e.g., produce reports indicating how many persons are suffering from a particular condition). With derived level information-sharing, the ICT system can perform possibly complex computations to calculate higher-level measures and indicators based on combinations of basic data items.

This presentation will discuss how derived level information-sharing can be linked to the concept of indicators of function and basic societal functions (BSF), as defined in the Utstein Style.

Conclusions: Information and communications technology-based systems have a key role in supporting effective coordination and control in disaster response. The framework presented here can act as a common reference for the design and assessment of such systems.

Keywords: control; coordination; disaster; information and communications technology; information-sharing; response

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Disaster Triage Tools—An Evidence-Based Review

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Introduction: Triage is the key principle guiding the ethical allocation of limited healthcare personnel and resources during a disaster incident. Disaster triage is based on the utilitarian concept of producing the “greatest good for the greatest number” by ensuring that limited medical resources are expended in a way that benefits the maximum number of patients. Several tools for primary disaster triage exist. Despite broad support for these triage algorithms, little research has been done to evaluate evidence to support the validity, reliability, or accuracy of these tools.

Methods: A strategy was developed for PubMed® and modified for use in the other electronic databases. The strategy used text words such as disaster triage, emergency triage, and mass-casualty incident triage. The electronic searches were conducted in April 2004, with an updated

search of PubMed in October 2004, and no restrictions based on publication date were used. Team members also searched the literature by hand to ensure comprehensiveness and reviewed the reference lists of relevant reviews, reference papers, and eligible articles. A total of 43 articles meeting these criteria were reviewed.

Results: Through an iterative, summative process, five primary triage systems were identified in the literature: (1) North American Treaty Organization (NATO); (2) Triage Sieve; (3) Simple Triage and Rapid Transport (START) triage; (4) JumpStart; and (5) CareFlight Triage.

No standardized nomenclature or terms between triage approaches exist. All triage methods used physiological criteria. There are two papers in the peer-reviewed literature that attempt to evaluate these mass-casualty triage tools. Sensitivities and specificities of each system have been reported retrospectively under simulated disaster scenarios. No prospective study has been published in a real or simulated disaster.

Conclusion: Using an evidence-based approach, no single standard triage criteria was identified. Triage systems have not been validated for disaster/critical event use. Specific subjects from the literature such as physiological criteria likely form a basis of consensus that should be validated and polished. While there are advantages to various published triage systems, no overwhelming evidence exists to support one system over another. There is poor strength of evidence to support any triage process. Currently there are criteria being developed to study triage systems more objectively.

Keywords: approach; criteria; disaster; review; triage

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Applicability and Usefulness of Hospital Preparedness for Emergencies (HOPE) Course in Southeast Asia

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Objective: In the last several years, there has been an increased interest in disaster preparedness and response. Based on this interest, a course, Hospital Preparedness for Emergencies (HOPE), was created for five countries in Southeast Asia: Bangladesh, India, Indonesia, Nepal, and the Philippines. Initially, the course was taught to the most experienced hospital/administration personnel in their respective countries. The purpose of this study was to describe the: (1) background of participants; (2) course; and (3) applicability of the course to participants.

Methods: A team of international experts developed a four-day course covering 30 topics and exercises. Participants, who were hospital administrators and senior hospital health officials, were surveyed pre- and post-course regarding background and applicability of course to work setting. To date, the course has been held in Indonesia, Nepal, and the Philippines.

Results: Of all participants, 66% (29–71%) are part of a disaster response team for their area, and 41% (14–61%) have attended a preparedness course in the past. The num-