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The Development of a Computer-aided Guideline System for Medical Disaster Response

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Following the Great Hanshin-Awaji Earthquake in 1995, Kobe University Hospital revised its emergency guidelines to incorporate the lessons learned from the earthquake. Since the revised guideline is published as a booklet of paper files, it is neither efficient nor effective to retrieve from it the necessary information during a real emergency.

To overcome this disadvantage of having to use a text-based guideline, we have developed a computer-aided guideline system. The system is designed to present a rule-based, decision cycle for decision makers that consists of the three components: 1) "Plan"; 2) "Do"; and 3) "Watch", according to the action rules abstracted from the text-based guideline. Through interactive communication with the system, a user can recognize what to do and what to have done.

Also the system provides multiple-user interfaces linked to the other functions such as weather forecasts, geographic information, triage simulation, and so on. Furthermore, the current system has the potential to be extended to intra-networking among the departments, and an inter-networking between the hospitals.

Keywords: communications; computers; decision cycle; decision-making; disaster; earthquake; forecasts, guidelines; Hanshin-Awaji Earthquake; networking; rules; simulations; text; triage; weather

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The Significance of Establishment of a Network System Between Disaster Base Hospitals in Japan

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Introduction: At present, approximately 500 large hospitals have been nominated as a Disaster Base Hospital in Japan. Essentially, only one Central Disaster Base Hospital was selected in each prefecture. It is believed that it will be useful to establish a network between disaster base hospitals. This study examined the significance of the establishment of such a network.

Materials and Methods: Forty-nine central disaster base hospitals were surveyed in February 1998 using a questionnaire. Themes questioned included: 1) agree or disagree to the establishment of the-network system; 2)

name of and the nature of the facilities that would participate; 3) themes to be discussed; 4) presence of a disaster handling manual in the participating hospital; etc.

Results and Discussion: Responses were received from 43 hospitals (88%). Answers included:

- 1) All of the participating facilities agreed to set-up the system with/without conditions;
- 2) Names proposed by us were approved by about two-thirds of the respondents;
- 3) Themes thought to be important and included in the system were in rank order by priority:
 - a) Establish cooperation between the multiple participating hospitals;
 - b) Common methods for use of network system during a disaster;
 - c) Provision of disaster education and development of disaster manuals with cooperation between the participating hospitals; and
- 4) Mutual exchange of stored goods in case of a disaster; and
- 4) A Disaster Handling Manual for the hospital was completed in only 16 of the participating facilities (<40%).

Conclusions: Several important problems were identified. The details will be reported plus the results of a second questionnaire that has been distributed to approximately 500 Disaster Base Hospitals.

Keywords: contingencies; Disaster Base Hospitals; disaster manuals; disaster plans; hospitals; networks; planning; surveys

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An Intrasystem Transportation Plan for Hospital Evacuation

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Introduction: Evacuation of hospital facilities rarely is necessary, but when deemed necessary, can be fraught with complications. The goal of emergency hospital evacuation is to provide an acceptable standard of medical care during patient transport without further depletion of local emergency resources. As the costs of emergency preparedness increase, management of finite medical resources becomes crucial to successful disaster planning.

Objective: To develop a comprehensive transportation plan for evacuation of patients within a single health system.

Methods: A non-municipal, non-9-1-1, emergency medical services (EMS) company was contracted by a university hospital to provide transportation services for its inpatients. These resources then were integrated into the hospital disaster plan as the primary source of trans-