

## PN7-2

**The Disaster Manual in a Multi-Media Style**

*Genro Ochi, MD; Kenji Nitta, MD; Morishige Tanaka; Shinnya Fukumoto, MD; Soichi Maekawa, MD; Yoichi Shirakawa, MD*

Department of Emergency, Ehime University School of Medicine, Ehime, Japan

Japan experienced two major disasters in 1995: the Great Hanshin Earthquake and the Sarin Attack in the Tokyo subway system. These events inspired our society to prepare for major disasters in the future; various institutes and organizations in our country are making efforts to bluish up their disaster manuals. When we make our own protocols for disaster management, we must have large amount of information and knowledge on protocol of other related institutes and organizations. We also have to keep the laws and ordinances in mind, and moreover, each information should be updated frequently.

Printed documents no longer will meet such demands, and will be replaced by computer-based electronic media. In our institutes, our hospital manuals for disaster management are under the way of instituting electronic versions. Besides circulating as printed matters among hospital staffs, we write our manual as a hypertext markup language (html) file, and some of the information is launched from our internet and intra-net servers. Our manual also includes disaster protocols for other related institutes, agreements with other organizations, and disaster-related laws and ordinances. The disaster manual in a computer-based, electronic, multi-media style will be a regular form in the next century.

**Keywords:** computers; disaster management; disaster manual; hospitals; laws; information systems; multi-media; ordinances; preparedness; protocols

## PN7-3

**Disaster Telemedicine — Part I: The Evolving Role of Telemedicine and Telecommunications in Disaster Response**

*Frederick M. Burkle, Jr., MD, MPH; Victoria Garshnek, MS, PhD*

Center of Excellence for Disaster Medicine and Humanitarian Assistance and the Pacific Regional Program Office, Tripler Army Medical Center, Hawaii USA

Disaster management utilizes a variety of technological modalities to accomplish a complex array of tasks. Although casualties have often been involved, there are few reports of telemedicine (medicine performed at a distance through the use of telecommunications) applied in disaster situations. Appropriate application of telemedicine has the potential to enhance future disaster medicine efforts. Therefore, it is helpful to review the history of its use in actual disasters or similar scenarios for added guidance. The post Cold War decade of the 1990s has allowed the United States space program and the military to re-focus their robust technology capabilities to support

natural disaster and international complex human emergency response activities. A series of improvements in space and ground-based technologies has resulted in an evolving communications infrastructure that provides a window into how these advanced technologies and telemedicine processes can serve as essential disaster management tools for the new millennium and provides the core knowledge of lessons learned. The current challenge is to relate these lessons to Disaster Medicine planning and begin to effectively utilize disaster-appropriate telemedicine tools.

**Keywords:** complex human emergencies; Disaster Medicine; military; process; responses; technology; telemedicine

## PN7-4

**Disaster Telemedicine — Part II: Future Applications of Telemedicine and Telecommunications in Disaster Medicine**

*Victoria Garshnek, MS, PhD;*

*Frederick M. Burkle, Jr., MD, MPH*

The Pacific Regional Program Office and the Center of Excellence for Disaster Medicine and Humanitarian Assistance, Tripler Army Medical Center, Hawaii USA

Disaster events always have been a fact of life. Success or failure of a disaster response often is determined by timely access to communication and reliable information. The rapid progress and future course in telecommunications indicate that lack of communications no longer needs be the paralyzing factor in a disaster scenario. This is important especially for medical response where time is of essence to save lives. This presentation explores various telecommunications tools that can enhance medical response in a disaster, and includes those associated with telemedicine (providing medical care from a distance through telecommunications). Disaster telemedicine systems need not be special or sophisticated — the challenge is to match the right systems with a given disaster plan or scenario. Communications pathways (including new Low Earth Orbit satellite systems), information technologies, artificial intelligence, computer miniaturization, and advanced sensor systems are described. Their advantages, disadvantages, and future potential are discussed in order to gain a better perspective of which tools might best fit Disaster Medicine's needs today and into the new millennium.

**Keywords:** communications; computers; disaster; Disaster Medicine; plans; response, medical; telecommunications; telemedicine

## PN7-5

**Are You Prepared to Make Tactical Decisions? Training Using Computer-Aided Simulation**

*Matti A. K. Mattila, MD, PhD*

Department of Research, Kuopio University Hospital, Kuopio, Finland

In every emergency situation and accident, the action consists of a series of important decisions, what to do, how