

Information-Sharing Networks for Global Emergency Medical Services

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Introduction: Counteracting disasters and emergencies requires cooperation and collaboration among all entities and actors. Advanced Internet technologies enable users to share information easily using a variety of formats. Diverse National and International Networks of Disaster and Emergency Medicine (DEM) have been launched by workgroups of users to support their efforts. But Global International and Interdisciplinary Networks usually are not sufficiently robust and new difficulties or threats jeopardize the fragile networks. This study focuses on the factors that impede evolution of the DEM Information Sharing Networks, effective strategies to implement networks, and policies that may facilitate such networks sustainable.

Methods: Multidisciplinary and international cooperation assumes significant and ever-changing contexts. Within this study, a qualitative review has been conducted leading to a critical finding. The current global DEM Networks' vulnerability currently is based mainly on two traditional limitations; lack of recognition regarding the dynamic nature of networks; and failure to aggregate like-minded groups. In addition to the qualitative review, an agent-based simulation model has been applied to perform a simple quantitative analysis of the DEM system evolution.

Results: These results indicate the critical need to identify and implement greater homogeneity across actors and institutions in order to establish DEMs.

Conclusions: At the ASI BioHaza-Milan 2008, supported by the NATO SPS Programme and well-characterized by civil-military collaboration, an Association for international cross-disciplinary Networked Information Sharing in DEM was proposed. The goal is to increase the breadth and frequency of conferences, boot camps, and cross-task activity on one global project.

Keywords: agent-based simulation; homogeneity; information sharing networks; international cooperation; multidisciplinary cooperation; qualitative review

Prehosp Disast Med 2009;24(2):s81

Teleconsultation and Telemedicine in Disaster Medicine and Austere Environments—"Satellite Telemedicine": A New Italian Project of the Alpini Field Hospital

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In the last decade, telemedicine has represented a new, innovative tool for the delivery of health care to remote or geographically distant locations through the use of communication tools and technologies. Telemedicine creates functional clinical exchanges between physicians and healthcare providers working in an austere environment, or in resource-scarce settings, and professionals with specialty expertise that can provide advice.

The authors describe a new concept of telemedicine as a tool in disaster medicine. They show how, with the support of technology and satellite connection, it is possible for a disaster medical team operating in an austere environment to contact specialists in real-time. Although working in a field hospital, personnel would be able to obtain a rapid medical consultation, send images, and talk directly with other specialists who often are not available in austere and remote settings.

The authors describe this experimental Italian model of "Satellite Telemedicine" as applied in the Alpini Field Hospital, a mobile hospital structure that operates during disasters or provides humanitarian medical assistance supporting civil protection in national and international contexts. Inside this structure, a "Mobile Unit of Satellite Telemedicine" was created.

The authors show how "Satellite Telemedicine" could be utilized as a future template in case of a disaster due to natural hazards or terrorist attack, where medical care will be in short supply, and could contribute to the building capacity for future disasters.

Keywords: communication; disaster preparedness; hospital preparedness; information technology; international cooperation; satellite medicine; telemedicine

Prehosp Disast Med 2009;24(2):s81

1-1-2 and Emergency Telecommunications in Europe: Past, Present, and Future

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The single European emergency call number 1-1-2 was established in 1991 through a decision of the Council of Ministers of the European Union. It is now available free of charge in the 27 Member States of the EU and is the subject of a substantial overhaul in the context of the review of the Telecommunications regulatory framework actually under discussion at the different EU Institutions (European Parliament, Council of Ministers, European Commission).

The European Emergency Number Association (EENA) has been active in promoting the knowledge and effective use of 1-1-2 in Europe. Through a series of conferences as well as active lobbying of EU Institutions, 1-1-2