

dominantly urban city, the survey was conducted in five large business district commercial centers in the city.

Results: Out of a total of 1,000 responses (200 from each site), 249 responses were incomplete. The remaining 761 were analyzed. A majority (700; 92%) of the respondents thought that the best way for a patient to get to the nearest hospital would be either to take them themselves 68% (518), or call the police 24% (182). Only 7% (54) would call an ambulance. The majority of the respondents knew which number to call for the police (98%; 747), fire services (66%; 499) or to call for an ambulance service (70%; 535). When queried about the possibility of a universal emergency services number, 696 (91%) said that they did not want a single number.

Conclusions: The general public has not been introduced to the concept of a universal emergency number and its advantages. The current survey demonstrates the need for administrators, policy makers, and public educators to examine the issue of implementing a universal emergency number as a part of developing emergency systems in India.

Keywords: development; emergency services; India; universal emergency number; utilization

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(O73) Management of Incoming Information in the Athens Emergency Medical Services Dispatch Center: Preliminary Results

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Introduction: The most crucial stage of the response to a medical emergency is the management of the initial information given by a bystander.

Methods: A random sample of 100 incoming calls to the Athens Emergency Medical Services Dispatch Center was examined. Calls initially classified as non-emergencies and calls coming from physicians were excluded. The management of the given information by the telephone-operator and the dispatcher were recorded. If needed, the intervention of the physician-on-duty was recorded.

Results: In order to collect 100 calls classified as emergencies, approximately 3,000 incoming calls had to be filtered. The quality of the initial, unsolicited information given by the bystander/caller was mostly of very poor quality (82/100), leading to no reasonable conclusion. A small minority (9/100) purposely gave false information for personal interests. Also, a small minority (9/100) gave precise information regarding the current situation, leading to a correct conclusion and rapid response. The initial information (true or false) was interpreted falsely in 27/100 cases by the telephone operator and given as a wrong lead to the dispatcher. The dispatcher responded correctly to 60/61. The physician-on-duty in the dispatch center intervened in 69/100 cases.

Conclusions: The management of the information is of very poor quality, due mostly to false information initially provided by the caller. The high percentage of inadequate

management by the operator is surprising. The dispatchers have a high quota of correct responses to emergency calls.

Keywords: communication; dispatch center; emergency call; emergency response; information; information management

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(O74) Innovations in Disaster Communication

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Many after-action reports cite disaster communication failures and miscommunication between responding and receiving entities as system failures. Hospitals have not had robust, interactive communications. Medical Coordination Centers (MCC) are newer entities for facilitating and coordinating emergency medical care operations with public health, state, regional, and county disaster operations. First responders now are linked with hospitals in the distribution of patients to receiving facilities, field areas, or medical transport systems.

Interoperable communications, including common frequencies for field, hospital, and first responder groups with surge capacity and redundancy will greatly increase flow of patient care information to and from all agencies involved. Coordination of patient care with public health oversight, medical first receivers, usually hospitals, and regional and state responses will allow all responders to communicate care capacity and casualty transport, patient tracking, and supply sharing. If off-site field hospital care is necessary, pre-arranged communications equipment, storage, and transport of emergency equipment, plans defining lines of communication within and among all agencies, and common and agreed messages should be part of local, regional, and state planning. Additional equipment available from any stockpiles can be part of the plan.

Pre-event communications should have the rapid ability to surge to handle more messages, add additional capacity as needed, and provide back-up systems in event of failure. Messages, needs, and coordination with joint information centers must be prioritized. Terminology should be standard and uniform and an expansion of ordinary systems to allow responders to keep current without repeated education on seldom-used new systems. Operators should understand equipment limitations and capacity.

Drills can keep personnel familiar with standard scaleable operations systems, but cannot completely simulate real situations. Planning, surge capacity, and redundancy will add to viable disaster medical communications.

Keywords: communication; coordination; disaster; innovation; planning

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(O75) How US Cities are Using the Web to Communicate Disaster Information to Individuals with Chronic Illness

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Introduction: Hurricane Katrina demonstrated that individuals with chronic illness face significant challenges during

disasters. In Katrina's aftermath, various US cities are using Websites to provide citizens with information on how to prepare, respond, and recover from disasters. This study examined how US cities are using the Web to inform citizens with chronic illnesses on how to manage disaster challenges.

Methods: Using information from health organizations, a checklist was developed of information that individuals with chronic illness need during a disaster. This checklist was used to assess how 10 cities are using the Web to inform those with chronic illnesses on how they can obtain evacuation assistance, receive post-disaster health services, and address other challenges.

Results: The findings indicated four problems in how cities provide information. First, the information provided often deals with challenges that emerge immediately following a disaster, but neglects challenges that arise during the longer process of disaster recovery. Second, the information provided does not address the challenges arising from specific chronic illnesses. Third, information providers often assume that external caregivers will be present during a disaster. Fourth, much information is inaccessible to those with hearing or sight disabilities.

Discussion: Cities should strive to provide accessible information that focuses on long-term disaster recovery challenges, addresses the challenges of particular illnesses, and recognizes that external caregivers may not be present during disasters.

Keywords: chronic illness; communication; disaster; Internet

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(O76) Application of Information Technology in Disaster Medicine: Ubiquitous Health Aspect

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Introduction: Medicine based on digitalized information has evolved to telemedicine, electronic health, and ubiquitous health coping with the progression of information technology. Characteristics of disasters have changed, and the creation of cyberspace is no exception. Due to the information technology (IT) revolution, information can travel beyond the limit of time and space through cyber space. This power has a huge role in prevention, relief, and recovery of disaster. The application of IT in disaster medicine, especially in the ubiquitous health aspect, was examined.

Methods: Through the search of medical literature and Internet Websites, the application of IT in disaster medicine was examined. Pubmed and Google were used for the search. The results were confirmed and evaluated by several groups of experts.

Results: Information technology fields that can be used in disaster medicine include: (1) telemedicine (to share clinical resources); (2) distance learning (just-in-time training); (3) geographic information system (GIS) mapping (real-time status of resources); (4) satellite phones; (5) Web portals; (6) vehicle tracking systems; (7) field-based patient registration and

tracking systems; and (8) field deployable sensors to scan for chemical and biological agents.

Field medical support systems that can be facilitated by IT include: (1) understanding the command and control system; (2) building a public health application and management system; (3) roles of medical staff; (4) roles of a hospital; (5) triage (u-tracking system); (6) management (u-Emergency Medical Services); (7) transportation (u-Ambulance); and (8) victim identification.

Conclusions: There are many fields that can be applicable to disaster medicine using IT. Applying more application to real disaster situation will support the disaster medical system more effectively.

Keywords: disaster; disaster medicine; electronic health; information technology

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(O77) Telemedical Consultations in Field Hospital in Extreme Situations

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Introduction: Small medical brigades in field hospitals must make difficult decisions regarding diagnostics and the treatment of patients with various diseases and injuries during extreme situations.

Methods: In this study, the experiences of using telemedical consultations (TMCs) during the operation of a children's field hospital (CFH) of the All-Russia Center for Disaster Medicine in the Chechen Republic (2002) and a Russian mobile hospital in earthquake-impacted region of China (2008) were analyzed. The TMCs occurred through a system of combined access using a special satellite antenna in the CFH and a satellite phone ("Iridium") in China.

Results: A total of 64 telemedical consultations regarding 54 patients were conducted in the CFH with the medical centers of Northern Caucasus and Moscow. The network was created with four telemedical centers, and involved employees of six scientific institutes and five large hospitals. Seventy-seven percent of the TMCs were regarding patients with surgical pathologies. Treatment tactics regarding nine patients was specified after TMCs, eight patients were evacuated urgently to the specialized hospitals, and 37 patients were directed for scheduled treatment. Telemedical consultation was not completed for three patients. A total of 14 TMCs were conducted in China: two patients were evacuated to the specialized departments of local hospitals, and two cases specification of diagnoses and medical tactics.

Conclusions: The use of TMCs demonstrated high efficiency for establishing diagnoses and medical tactics, and operative decision-making regarding patient evacuation.

Keywords: children's field hospital; communications; emergency; medical aid; telemedicine

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