

(178) Preparing for a Pandemic: The Need to Connect Rhetoric and Resources

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Substantial, worldwide attention has been focused on the need to prepare for the possibility of a severe pandemic, possibly involving a variant of the H5N1 influenza virus. While much discussion has focused on the need for a range of critical strategies, including enhanced surveillance, the development of containment protocols, vaccine research, anti-viral stockpiling, non-pharmaceutical interventions, and hospital readiness, neither the global community, nor any individual nation has developed adequate levels of preparedness to manage the consequences of a major pandemic. In the United States, more than US\$7 billion has been designated for pandemic readiness with >90% of these resources directed toward developing vaccines and anti-viral pharmaceuticals. Local public health and health services systems remain substantially underfunded, even though they will need to function at a high level, particularly if a pandemic were to occur prior to the availability of appropriate vaccine. Public health and health systems needs in facing a pandemic will be reviewed, accompanied by an analysis of an important gap between the projected need and current, available resources in the US. Additional resources for global early warning and rapid response also are needed. In addition to funding shortfalls, there are serious gaps in the planning process, itself, with respect to the non-medical, economic, educational, societal, and psychological consequences of pandemics.

Keywords: influenza; pandemic; preparedness; public health; resources; vaccinations

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(179) Coordinating the Capacity in Disaster Prevention and Response: A Demonstration Case

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Five types of natural disasters occur in Taiwan: (1) typhoon; (2) flood; (3) earthquake; (4) landslide; and (5) debris flow. Each disaster has the potential to cause huge social, economic, and environmental disturbances. The National Science and Technology Center (NCDR) was established in 2003 to combine effectively the research momentum, enhance the research results, and integrate inter-disciplinary resources, as well as to coordinate central ministries advancing disaster prevention, response, and recovery. Since the NCDR has undertaken the role of disaster coordination and began issuing early warning to hazard-potential areas, the number of casualties has decreased from >200 persons per typhoon event to 15 persons per event. With the goal of promoting the development of research and technology for the implementation and application of disaster management, the NCDR supports: (1) research and development; (2) technical support; and (3) application and implementation activi-

ties. Participating in disaster recovery activities is one of the important missions of the NCDR. Adopting appropriate community-based strategies into the decision-making process and constructing a unique plan for each community have proven to be effective ways to enhance recovery from a disaster. Recent natural hazard events have demonstrated the success of NCDR in disaster prevention and recovery.

Keywords: coordination; disaster prevention; National Science and Technology Center (NCDR); preparedness; response

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(180) Hospital Workers: Who are the Essential Personnel during a Disaster?

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Introduction: Hospital plans often vary in defining the functions that are included in emergency and incident management positions. There is no guideline that describes what roles within a hospital must be fulfilled to effectively respond to and recover from a disaster or public health emergency.

Methods: In this study, 31 hospitals in the 7-county northern metropolitan New York City region were surveyed to determine which specific functional roles were considered essential to their hospital's emergency and disaster plan. Furthermore, hospitals were asked to estimate the percentage of their "essential" staff that was trained to perform the critical duties identified in their hospital plans.

Results: Only three categories of hospital personnel were consistently reported to be "essential" to all hospitals' emergency preparedness plans: ED physicians, ED support staff, and ED nurses. Some hospitals reported that staff members received no training in their anticipated role based on the hospital emergency response plan. Allied health professionals and EMTs/Paramedics had the least amount of training for their role in the hospital preparedness/response plan (33.3% and 22.2% respectively).

Conclusions: Although there may be general consensus that staff in emergency departments are considered essential during a disaster or public health emergency, training to perform their critical functional roles may not be provided. Sustainable training programs must be designed that involve all staff, to increase the knowledge of their individual roles and responsibilities during a disaster.

Keywords: emergency department; essential staff; preparedness; roles; training

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(181) Referral Patterns of Patients in Disasters—Who is Coming through Your Emergency Department Doors?

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Introduction: The emergency medical services (EMS) system is one of the key components in public health emergency preparedness and response. The EMS system has developed over the past 30 years into an effective means of delivering prehospital medical care. However, case reports in the literature and after-action reports from major inci-

dents have demonstrated that most patients who present at a healthcare facility during a disaster or other major emergency do not necessarily arrive via ambulance. If these reports are accurate, then hospitals and EMS systems should plan differently to prepare for a mass convergence of patients at the healthcare system and consider alternative patterns of patient referral including self-referral when performing major incident planning.

Methods: Using numerous search engines and databases, reports of patient care during or after disasters or major emergency incidents were identified. These reports were queried for specific information on how the patients presented to, or were referred to the healthcare location.

Results: Almost all case reports identified discuss the importance of the prehospital emergency care system. However, many suggest that only a fraction of the treated patients arrive via ambulance, particularly in the early post-event stages of a disaster.

Conclusions: Hospitals should develop emergency plans that consider the alternative referral patterns of patients during a disaster or major emergency. Hospital staff should be proficient in triage, decontamination, and safety and security procedures, in the event that they encounter a patient surge in their facility immediately following the onset of a disaster.

Keywords: ambulance; emergency medical services; hospital; patient surge; prehospital

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(182) Attitudes of the Israeli Population on Coping with Epidemic Outbreaks

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Background: Successful epidemic planning and preparation ensure that, in the case of an epidemic, there will be minimal panic, the most efficient treatment will be provided, and the population will return quickly to its pre-epidemic status.

Purpose: The purpose of this study was to determine the attitude of the Israeli population regarding epidemic outbreaks.

Methods: A questionnaire was sent to the public; information from a sample of 801 individuals representing the Israeli population; and telephone survey including every area code in Israel was performed.

Results: Of those surveyed, 82% agreed that fear causes panic, and 72% agreed to be quarantined during an epidemic, and to follow all instructions. Women were more likely than men to follow instructions.

Of those surveyed, 75% of the public believed that the media encourage anxiety and fear among the population. A total of 87% preferred that information regarding the epidemic be presented to them directly by the Ministry of Health and infectious disease experts. Of those surveyed, 94% agreed that the public health system must prepare the population before an epidemic outbreak. A total of 93% believed that there is a need to strengthen international connections for oversight and control of infectious diseases.

Conclusions: The health system must prepare the public prior to an outbreak. Information regarding epidemic outbreaks and the safety precautions that must be followed during these outbreaks should be presented to the public directly by the Ministry of Health and infectious disease experts. Women represent important communications targets. The sample population agreed to be quarantined during an epidemic and to follow all instructions. An epidemic outbreak preparedness plan using this information should be implemented.

Keywords: attitude; communications; epidemic; Israel; preparedness; quarantine

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(183) Pharmaceutical Services and Preparedness in Brazil

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The Millennium Goals of the World Health Organization (WHO) include the protection of vulnerable persons. The Hyogo Declaration of the United Nations presents the need for the dissemination of information regarding disaster prevention, enhancing preparedness, and emergency response. It is imperative that governments develop and implement policies related to response for disasters such as epidemics. Brazil has a broad health system, which includes pharmaceutical services, but it does not have any established organization for dealing with disasters. The pharmaceutical services and possible areas within those services should be involved in disaster preparedness will be described, by analyzing policies and health structures that may play a role in augmenting the local response to an epidemic.

Pharmaceutical services will be characterized by reviewing official documents and legislation, and by interviewing key stakeholders. Epidemic response guidelines for pharmaceutical services will be developed based on international standards and the logical framework for pharmaceutical services in Brazil. Validation of the guidelines will be achieved by gaining consensus technique. When faced with disasters caused by natural or human interventions, this study may be critical for furnishing crucial information to decision-makers on the development and implementation of policies regarding the preparedness and response of pharmaceutical services.

Keywords: Brazil; epidemic; guidelines; pharmaceuticals; preparedness

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(184) Information-Sharing Environment in Disaster and Emergency Situations

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An effective Information-Sharing Environment (ISE) is a key factor for the successful accomplishment of sensitive