Medical Management Of Chemical Disaster

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The aim of the medical management in chemical disasters is to provide the greatest benefit for the largest number of casualties in order to achieve a critical reduction in mortality and morbidity within the affected population. This is possible only if optimal preparation (medical preparedness plan) is anticipated together with an effective execution (medical response plan) in order to return to a routine health care situation as soon as is possible.

The key to the successful management of chemical disasters is preparation. A community-wide, medical preparedness plan is essential and must include: 1) epidemiology and risk assessments; 2) clearly delineated general and medical command and coordination lines; 3) tasks and responsibilities with job descriptions; 4) alarm phases and procedures; 5) information management; 6) intervention phases; 7) logistics including manpower, medical supplies and equipment and non-medical material; and 8) testing and evaluation methodology of the medical disaster plan.

The medical response plan must include: 1) preventive measures; 2) alert and warning procedures; 3) mobilisation of the health means; 4) scene assessment including detection and identification of the chemical(s) involved; 5) deployment of the emergency medical system chain; 6) medical field management including technical actions, protection measures, decontamination, triage, medical care, evacuation, and distribution of the casualties; 7) management in the medical facilities; 8) psychological support; 9) environmental management; and 10) disaster follow-up.

Medical treatment for chemical exposure is limited and largely supportive with antidotes available for few substances. However, preventive actions can limit the risk of further exposure to the population and rescuers and preclude or minimize the health insult. Therefore, preventive strategies should be stressed in all planning efforts. The medical response plan must be executed at all levels by competent personnel and necessitates education and training.

Key words: chemical disasters; command and coordination; disaster management; emergency medical services; epidemiology; medical preparedness plan; medical response plan; morbidity; mortality; planning; preparedness; prevention; risk assessments

Keeping Chemical Emergencies from Becoming Disasters

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The traditional approach to emergency response is well-known. The long-established role of the first responders has been "canonized" in a myriad of plans that are practiced and drilled on a routine basis. Today, the emergency issues have changed and the societal demands require individuals and organizations previously not considered as responders to become a part of the system. The fire response no longer is over when the flames subside, and the impact of a flood can last for years as the environmental damages are addressed. Throughout the world, there is major concern regarding terrorism, the impact of which is yet to be determined.

Emergency preparedness and response in the United States has undergone significant changes over the years and continues to evolve. The demands on the response forces have increased, requiring new and different skills, equipment, personnel, organizational structure, and terminology to facilitate communication. The risks facing the response forces and the public have increased at an alarming rate. Activities previously considered as an acceptable level of performance no longer are adequate to meet the challenges facing our society.

The role of the health professional in response activitie no longers is confined to an ambulance or hospital. Rather the skills must be focused in such a manner so as to address the broader health issues. The Academics must move from their institutional halls of higher learning to bring their skills to bear on resolving the emergent problems and to assist in preparing for the next event. A reassessment of current approaches to planning, response, and recovery must be undertaken. At the same time, we must not fall into the trap of becoming over planned, equipped, specialized, and vastly under-trained to deal with the reality that will face the community.

Key words: chemical emergencies; disasters; emergency response; environmental dangers; preparedness

Disaster Medicine-Humanitarian Medicine

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Disaster unfortunately, and help fortunately, are as old as humanity. As long as man has a beating heart, some adrenalin, and a reflex for protection, he has had compassion and an urge to assist those in distress. Historically, much assistance in emergencies has evolved from early wound dressing and pain relief, to specialized techniques like emergency medical services and Disaster Medicine; to institutionalized mechanisms like the Red Cross; to newer concepts like disaster prevention, and sociopolitical arrangements, like Humanitarian Medicine.

Fundamental developments now are taking place in disaster management:

1) Disasters no more are considered fatalistic phenomena, but rather foreseeable and prventable events;
2) Those who provide assistance now do so not as a gesture of sympathy, but as a charity, but as a right;
3) The stricken communities and nations are claiming