

required, and that can be achieved only by assuring an adequate communication network linking all of its components.

21 Disaster Planning in Hospitals: Organization of the Emergency Department

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In mass-disaster situations, the emergency department (ED) usually is the first area of the hospital to cope with the suddenly increased patient load. Activation of the ED by the responsible civil authority usually sets off the chain of events.

Recall and mobilization of staff is guided by initial casualty estimates. A rehearsed recall system often works best. The ED floor area then is reorganized and often temporarily expanded. Staff reporting to the department is given specific assignments by the ED director. On arrival, casualties are tagged, allocated triage packets, and triaged by a senior doctor to separate categorized treatment areas. At these areas, designated, organized teams backed by necessary medical supplies provide mainly resuscitation and initial stabilization. Casualties requiring hospitalization then are sent either to the operating theaters, intensive care units, or designated disaster wards by dispatch teams. Very often, a separate area of the ED needs to be allocated for adequate care of regular emergency (non-disaster related) patients who continue to arrive. Patient documentation and reporting of casualty disposition to hospital management are important ED functions. Crowd control, traffic flow, and security should not be forgotten.

Regular exercise drills ensure familiarity of these procedures by ED and hospital staff. This will decrease the chaos and confusion inherent in disasters.

22 Improvement of Hospital Preparedness for Mass Casualties of Chemical Warfare in the Aftermath of the Gulf War

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The Gulf War exposed the Israeli civilian population to the reality of chemical weapon attack. The threat of such an attack demanded preparedness of medical and auxiliary services for handling a unique, mass-casualty disaster.

A plan for hospital organization, triage, decontamination, and treatment had been devised previously, and the hospitals were prepared accordingly. However, this first-time, real threat of chemical weapon attack required prolonged hospital preparedness which enabled improvement of this doctrine. Updates of the doctrine included: 1) the deployment of pre-hospital medical units to regulate the flow of casualties and to treat the very mildly injured; 2) organization for early intubation upon arrival at the hospital, before decontamination, by

teams wearing full protective gear; 3) construction of a program for large numbers of psychologically affected victims; and 4) preparation of the hospital for the possibility of direct contamination by the chemical agent, early detection of chemical pollution in the hospital area, and immediate implementation of an alternative plan of management.

Based on these principles, the improved doctrine will be presented for hospital deployment in chemical warfare which also may be applied in other civilian toxicological mass disasters.

23 Planning and Management of Disasters in Hong Kong

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Introduction: Some of Hong Kong's major disasters with mass casualties in the last few years are presented. These include: air crash; sunken oil barge; power-plant explosion; refugee fight; and mass trampling.

Disaster Exercises: Air-crash exercise and underground mass-transit train disaster exercise are rehearsed at least twice a year. Major hospitals have individual disaster plans and exercises. Highlights of these exercises are presented.

Coordinating Disaster Management: Hong Kong Hospital Authority has developed a special contingency plan in the event of major disaster. Two major regional hospitals will receive and support the disaster management jointly. A casualty team and a medical-control officer are available to be dispatched and will manage casualties through a joint coordinating procedure.

Conclusion: This presentation stresses the importance of multi-disciplinary team work and coordination in management of disasters. Training and frequent practices are essential to achieve a successful outcome.

24 The "Group from Gent": Harmonization of the Medical Discipline in Disasters in Belgium

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Objective: The country-wide standardization of procedures, responsibilities, functions, and materials for medical intervention in disasters.

Methods: After several meetings, a first draft was formulated in accordance with elements clearly described in the law and with the generally accepted principles of Disaster Medicine, by the organizers of disaster medicine courses, representatives of the

concerned ministries, the Belgian Society for Emergency and Disaster Medicine (BeSEDiM), and the field workers. Once an agreement about the entire text was achieved, it was presented to the different authorities and accepted.

Results: The publication of a practical primary text clearly stimulated elaboration of the medical aspects of local disaster plans. In those locations where, prior to this agreement, some medical plans already existed, some resistance to abandon their specific terminology was observed. This is due to the fact that, on the ministerial level, those new directives are not yet official.

25

Emergency Surgery under Disaster Conditions

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The Czech Republic's trauma team is a mobile unit trained in emergency surgery and traumatology. Established five years ago by the Ministry of Health of the Czech Republic and the Trauma Center in Brno, it operates under the command of the Secretary of State for Health. This unit can perform emergency medical services and trauma care in our Republic as well as anywhere in the world. The team's full readiness response time is eight hours. It is prepared to function under makeshift conditions in disaster areas. The surgical capacity of the unit is 200 major operations within a period of four days, in addition to other constant activity including emergency care and urgent hemodiafiltration. The team can be staffed in four separate units of four to 40 persons. A full range of medical equipment is appropriately packaged and easily transported.

This presentation will describe five years of team experience and activities in disasters which occurred in Nicaragua, Armenia, Romania, and Iran.

27

Triage for Health Emergencies in Technological Disasters

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(No Copy Provided)

28

Computer-Aided Planning

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Objective: To exemplify in a dozen applications how computing can be used in various fields of Disaster Medicine, e.g., planning, simulation, and education.

Methods: Sit down with a pencil and paper. List the things the program will do and the order in which they will be done: it is a simple sketch. Nearly everything already is done for you in BASIC. One does not need to spend a year learning a computer programming language.

Result: Computer-Aided Planning provides a possibility to compile and print plans and inventories and keep them up-to-date without spending too much time. Simulations present opportunities to test the plan in a way the more expensive full-scale training cannot do. Vary the opening parameters and see what the outcome will be—over and over again. The computer will be an indefatigable and firm, but a fair, teacher in computed education.

Conclusion: If a program is desired that just does not exist—create it. Anything computed will simplify disaster planning and perhaps, sooner or later, make it an enjoyable art.

29

Medical Command for Disaster Shelters

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Objective: This paper describes the structure and function of a newly devised system for disaster medical control.

Methods: A central hospital command-post system had previously been developed to provide direction to disaster workers. It utilized amateur, short-wave radio operators for communications, and was staffed by emergency physicians (EPs) trained in the Disaster Health Protocols of the American Red Cross.

Results: On 11 December 1992, the medical command system was activated. Radio operators in each shelter established contact with the central command-post. Medical records were maintained. When transport from shelters to hospital emergency departments (EDs) became necessary, the radio operators notified county emergency medical services (EMS). A Red Cross volunteer emergency physician was stationed in one shelter. The scope of permitted medical service was expanded to include the dispensing of usual medications to chronically ill, stable refugees, obviating the need for transport.

Conclusions: Emergency physicians trained in disaster management can effectively direct a disaster medical command-post from hospital EDs. There is a need to develop further a network of trained community medical personnel to conserve scarce resources.