

075.
**A Lesson from the Rwandan Tragedy:
 The Need for Integrated Medical
 Emergency Relief Programs**

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In July 1994, more than one million Rwandan refugees fled the atrocities of a civil war, crossed the Zairian border, and flooded the resort town of Goma, where they were met by a major cholera epidemic. The refugees were quickly moved by the Zairian authorities to unsuitable areas with no water source in a region covered by lava outflow, thus prohibiting the digging of graves and latrines. Thousands of uncollected bodies were lying in the Kibumba camp with a refugee population estimated at 350,000 people.

This presentation will describe the various phases of a joint relief effort sponsored by the International Rescue Committee in collaboration with the American Jewish Joint Distribution Committee. We will discuss the lessons learned from establishing the first line medical aid, the availability of medical back-up support, the build-up of a sanitation program, the utilization of human resources in the refugee community, and the creation of health posts and health centers. Finally, a case will be made for better coordination between the various relief agencies and for the creation of integrated multidisciplinary emergency relief modules with rapid intervention capability.

120.
**Major Determinants Influencing the Size and
 Components of a Medical Delegation to a
 Mass-Casualty Region**

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Various countries and nongovernmental organizations offer medical aid in reaction to various mass-casualty disasters. Since disasters vary in magnitude, extent, location, and nature, so is the type and extent of medical care required very heterogeneous. Various aspects of needs assessments, manpower resources, equipment available, transportation capacities, volume and the nature of the medical delegation offered are inter-related, and ultimately will influence the construct of the medical help provided.

The aim of this paper is to analyze the various components of such decision-making: time, date, resources, definition of aim and targets. Through this analysis, we will try to assist those who will have to plan a medical delegation for disbursement to a disaster area. The dilemma between thorough screening, data collection, needs assessment, and prompt, actual medical help is highlighted.

The major role of any coordinating organization in such conditions, and the crucial aspect of communication between the coordinating organization and the various governmental and volunteer organizations will be discussed with special refer-

ence to the effects of these relations on the planning aspects of the medical missions.

130.
**Disaster Management Training
 for Hospital Staff**

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Disasters demand extremely rapid mobilization and reorganization of personnel and logistics in a hospital. Senior hospital managers often presume that their innate management abilities will see them through disasters. Frequent disaster exercises are not welcomed and often are taken lightly by hospital staff and management. Hospitals, therefore, continue to experience chaos and confusion especially during the first few hours of a disaster management effort.

Singapore General Hospital recently embarked on a Disaster Medicine Training Program. The first such course in disaster medicine involved a series of lectures, including some on the organization of hospitals and blood, forensic, and psychological support. This was followed by a whole-day disaster simulation exercise involving management of three hospitals.

Disaster medicine simulation training packages for hospitals can be built-up for the following areas:

- 1) Training in hospital's mobilization and recall system;
- 2) Training of emergency department senior and junior management in departmental organization, patient flow, and intradepartmental coordination during disasters;
- 3) Training of the operations theatre senior staff in organizing theatres, theater teams, mobilization of various grades of staff and types of equipment, and interacting with other areas, e.g., intensive care, emergency, disaster ward(s), and a hospital command post;
- 4) Training of intensive care staff for coping with disasters;
- 5) Training of operations of disaster wards;
- 6) Training of hospital senior management in the control and coordination of key hospital areas during disasters.

099.
**The Emergency Physician: Let's Talk
 About the Best Formative Iter**

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The sanitary emergency always has represented a weak point in the organizational structure of the sanitary system for a couple of reasons. The first is represented by the aspects typically connected with the timeliness of the intervention in a condition of critical pathology, and the second regards the emotional impact produced in the patient. These are the reasons that these particular physicians need a qualified, formative system

that gives them the possibility to put into practice their knowledge in a field in which "time" is a detail of primary importance.

Our area has been providing refresher training courses for a long time. These courses are addressed to local physicians and their task is to provide them the technical and practical information that usually are requested in cases of emergency. Their principal aim is to show how to behave in these particular situations: they teach how to make use of technologies. After considering all of these factors, we think it is necessary to mention some distinctive features that determine the knowledge base of a physician who operate in the prehospital emergency field.

This physician must be able to:

- 1) Identify and deal with the main internal acute pathologies;
- 2) Carry out a simple or complete cardiopulmonary resuscitation in proper way;
- 3) Stabilize and immobilize a polytraumatised;
- 4) Know the tectonics of auto-protection in order to work in safe conditions;
- 5) Use the radio properly;
- 6) Know the location of each hospital provided with departments for critical patients;
- 7) Know the several types of sanitary means of transportation;
- 8) Organize and regulate a sanitary intervention in case of emergency, from the "yard" to the "PMA";
- 9) Keep a cool head even in the most uncomfortable situations;
- 10) Have an aptitude for command—being able to keep up the position of "leader" in the management of the aid;
- 11) Have and keep a physics performance that allows any working condition; and
- 12) Check and update the organizing, technical and medical knowledge every so often.

This kind of training has been brought into action for some years and it has improved both the cultural level and the performances of each operator. Besides, thanks to this sort of initiative, the same operators have considered the opportunity of cooperating together with the other components of the rescue chain.

039. Modeling Disasters

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It is common believe that disasters create chaos. Yet, it is possible to bring order into these events. By dividing the chain of medical care into phases, each of them can be analyzed according to personnel, material and methods utilized, resulting in a capacity for each phase. Not only are these principles of importance in the response stage, but also in the preparedness stage. This model could be used to develop scenarios for different areas (centers) and sites at risk (airports, stadiums, industrial sites, etc.) possibly with the aid of a computer.

038. Education and Training in Disaster Medicine

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Without proper education and training of personnel, the use of excellent material and efficient methods is worthless for managing a disaster adequately and efficiently. Therefore, in 1992, the International Society of Disaster Medicine issued a curriculum for education and training in disaster medicine. Seven levels of knowledge and practical skill are defined, varying from ambulance staff to medical coordinators. The topics included are medical care, public health, disaster management, and education and training.

The most logical next step ought to be the production of a uniform and standardized text. In this respect, however, the problems encountered are two-fold: 1) disaster management proper is mainly determined by the socio-economic and the lego-administrative infrastructure of a specific country; and 2) by the various "schools" responsible for teaching disaster medicine. The International Society of Disaster Medicine and the World Association of Disaster and Emergency Medicine could play an important role in solving these problems.

128. Multimedia Teaching in Disaster Medicine

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The use of multiple media resources (text, graphics, video, and sound) in teaching applications increases a student's attention and allows self-instruction, putting the user in a computer-simulated environment, where he can test his capacity to make appropriate decisions and actions. This is useful in particularly disaster medicine, which requires the capacity to follow scheduled flowcharts, and to apply a high number of manoeuvres that cannot be described effectively using only text and figures.

In 1995, our department, in cooperation with the TELEMED Consortium, set up courseware on basic cardiopulmonary resuscitation. Every page of the courseware describes a life-support procedure using text and digital video. Hypertext allows the user to browse between related concepts. Rapid data access is provided by automated analytical indexes and by an operative flowchart that summarizes the sequence of procedures to be carried out. A training section includes various types of test (multiple choice, graphic choice, open-ended answers) and a simple simulation which allows the user to learn the correct tempo and alternation of CPR manoeuvres.

The multimedia courseware on basic CPR presently is used by our sixth-year medical students during the academic year 1994–95. Pre-test versus post-test comparison showed a satisfactory global increment of student performance.