Evaluation of the Emergency Management in Developing Countries

Prof. Gilbert Burnham
The Center for International Emergency, Disaster & Refugee Studies, The Johns Hopkins University Schools of Medicine and Public Health, Baltimore, Maryland USA

The careful evaluation of the management of emergencies needs wider attention. As the population exposed to hazards increases world wide, and as risks multiply, there is more that we need to know in order to manage them. Furthermore, as conflict-related emergencies increasingly are becoming chronic, evaluation methods need to demonstrate not only that assistance is maintaining health, but also that it is not prolonging the conflict. Although some tools have been used for many years in developed countries, new approaches are needed for developing countries. Characteristics of many developing countries are a weak central planning and management capacity, a lack of strong decentralized emergency response capacity, and dependence on the international organizations for a response. Robust tools that will work in this environment are needed.

A variety of evaluation tools exist that can be adapted and applied as program indicators, particularly in public health activities. Key benchmarks have been developed and published as the SPHERE standards. These cover not only the traditional outputs and outcomes, but also the process used to establish assistance.

Despite traditional planning tools, we, also, have increasing problems preparing for emergencies, which have no organizations able to play a leadership role. Even within the UN system, the Consolidated Appeal Process has many duplicate and uncertain steps. A community-based approach is needed for developing countries; yet, traditionally, vulnerability assessment is addressed from a central-based approach.

There is now the need to more aggressively address the economic indicators of emergencies, moving beyond the usual assessment of dollar value of property loss. What was the number of Disability-Adjusted Life Years lost in an earthquake? How has an event affected the productivity of a population? Can we compare—in terms of human existence—earthquakes, road traffic accidents, and childhood diseases in a way that will help countries effectively allocate meager resources?

Beyond these, questions about the consequence of emergency aid remain. What are the effects of assistance on market prices or employment patterns? More importantly, what effects may international assistance have on the nature of conflicts? Does it extend the life of conflict by fueling it? Does it raise the stakes and make the individual and/or communities more vulnerable? Does it impede the post-conflict rehabilitation of infrastructure?

There is much we need to know to be effective managers. Some instruments are on hand, others need to be developed. Perhaps the most critical element is guaranteeing that learnt information is used properly in the decision-making process.

Keywords: aid; community; developing countries; emergency, evaluation; indicators; outcomes; planning; rehabilitation
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2.8. Technologies in Defence Medicine

Why Use Simulation in Military Medicine?

Dr. Richard Morris
Director, Research and Development, Sydney Medical Simulation Centre, Australia

Three factors make simulation a vital and timely part of training in military medicine: the nature of the work, the technology available and the developments in educational techniques.

Resuscitation of critically ill casualties forms a significant part of military medical work. The wide variety of clinical problems includes blunt and penetrating trauma, chemical and biological agent exposures, hyperthermia, envenomation, electrocution, drowning and myocardial ischaemia. Dealing with these conditions requires a rapid coordinated team response in varying environments.

Recent developments in simulation technologies now permit recreation of many physical signs and monitoring displays. They have created robot patients that can react realistically to a wide variety of interventions. In addition the ready availability of audiovisual and computing resources make recording and reviewing scenarios easier.

Perhaps the most significant changes though have been in educational strategies that enable us to make best use of this technology. It is clear that it is not enough to have only theoretical knowledge about all these problems. We need to rehearse our solutions. The understanding and techniques become ineffective without the ability to plan and coordinate their application. Increasing emphasis is being put on issues that relate to teamwork and communication in delivering effective treatment. The use of interactive, small group learning with practical scenarios and immediate debriefing enable review of events and answers to two important questions: 1) What did we do well, and 2) What can we improve on in the future?

Military training has used simulation for many years. Recent developments in patient simulation have brought new opportunities for improvements in medical training. The dictionary defines skilled as having knowledge, dexterity and preparedness to act. Simulation is the next best thing to real life experience in improving our skills.

Keywords: Military medicine; preparedness; simulation; training
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The Organisation and Design of Field Hospitals

Lt. Col. Rowland M. F. Gill, MB BS MmedSci MFOM MRCGP

SO1 Force Development, Army Medical Directorate, MOD, Royal Army Medical Corps United Kingdom. The organisation and design of field hospitals within the British Army is evolving in line with the trend to more expeditionary operations. This presentation will discuss principles

for the design and deployment of field hospitals, including the military and clinical requirements. It will firstly consider the operational context. Design options for the key clinical areas and the use of tents and container systems will be examined. The paper will conclude by describing an incremental concept of deployment of field hospitals from a 25 bed Hospital Troop up to a 200-bed Field Hospital.
Keywords: British Army; field hospital; military; tents
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2.9. Emergency Hospital Operations

Emergency Department Preparations for Disasters

Dr. Francis Lee Chun Yue, MBBS (S'pore), FRCSEd (A&E)
Head and Consultant, Department of Emergency Medicine, Alexandra Hospital, Singapore

In many countries, emergency departments (EDs) serve not only as the main provider for acute and emergency care, but as a central portal of activity in disaster management. The EDs often are expected to be an early, if not first, responder to a disaster, and in many instances, they also are responsible for coordinating the disaster response of the hospital.

Successful disaster preparation requires assigning a high enough priority to the project; good support from the hospital administration; and active participation of staff at all levels. These factors apply, regardless of whether a hospital or an ED disaster plan is being developed.

A major difficulty in disaster planning is translating a written plan into a meaningful response in a real crisis. All disaster plans will fail if they remain "classified", locked away for security reasons, and known only to a few individuals. The importance of developing a disaster training programme for ED staff and encouraging active participation in the planning process cannot be overemphasized.
Keywords: disaster management; emergency departments; plan; preparation; training
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Hospital Command Systems for Disasters

Prof. (Dr.) V. Anantharaman, MBBS, FRCP (Edin), FRCS Ed (A&E), FAMS
Senior Consultant/Head, Dept of Emergency Medicine, Singapore General Hospital, Singapore

Though hospitals frequently are situated remotely from disaster-sites, a disaster often goes to hospitals in the form of casualties. When large numbers of casualties occur, hospitals need to modify their operations in order to cope with the influx of patients. There are two aspects of hospital readiness and control in disasters. One involves the in-hospital organisation for managing disaster patients brought to the hospital. The other involves the coordination of hospitals in a community.

A hospital requires a linear and clear system of organisation, command and control, and reporting. The hospital senior management will need to be in close contact with the key line units; in disasters, these will include the Emergency Department, Operating Theatre, Intensive Care Unit, and Disaster Wards. This direct management has to be supported actively by a dedicated Operations Department, Personnel, Logistics and Communications Departments. These relationships must be defined clearly in a concise hospital disaster management plan drawn up and regularly exercised, reviewed, and coordinated by a Hospital Disaster and Emergency Planning Committee.

Within a community, coordination of hospitals during a disaster is crucial to ensure that casualties from the site are evacuated to well-prepared and appropriate hospitals. Such coordination may be carried out either by a designated hospital or by a central local health authority. The coordinating responsibility also comes with the responsibility of standardising desired responses and reports. Few communities have gone far in laying down coordination ground rules. Such coordination will be crucial for developing economies to minimise the adverse impact of disasters on their communities.

Various systems for command, control, and organisation of a hospital and for co-ordination of medical resources within a community will be discussed.
Keywords: casualties; coordination; disaster; disaster management plan; hospitals
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Disaster IT Support System

Mr. Kwan Fook Weng
Manager, Emergency Planning, Changi General Hospital, Singapore

In the event of a disaster, the Hospital Field Medical Teams, under the command of the Ministry of Health Disaster Site Medical Command (DSMC) will treat, and thereafter, evacuate the casualties from the incident site to selected government-restructured hospitals for further medical evaluation and definitive treatment.

All hospitals receiving casualties need to collate and maintain relevant information on the casualties, and send periodic reports and updates on casualties received and their status to Ministry of Health Co-ordinating Centre (MOHCC). The MOHCC reporting procedure is established to keep the medical elements posted on the situation, and to assist them in the process of decision making. The most critical information, besides rescue operations, should focus upon the survivors and casualties. Relatives and friends of the affected parties, including the media, will demand casualty information from the Ministry of Health. Reports must be accurate, comprehensive, and timely.

All of the hospitals in Singapore have their own computerised patient information system. However, for cost and practical reasons, these systems are not designed to handle information and reports required for disaster related casualties.

How information technology has been used in Changi General Hospital to enhance its efficiency in the management of casualty information and to generate the essential