

has four components: (1) EM administration training, (2) EM nursing training, (3) an EM one-year physician training course, and (4) a three-year EM residency program.

Results: The EMETC has finished its first year, and has graduated 70 students from its administration course and 65 from its nursing course, and 45 students will be graduating in March 2003 from its one-year physician training.

Conclusions: The development of EM as a specialty is a challenging venture. We propose a structure similar to EMETC that facilitates growth of all aspects of EM.

Keywords: Emergency Medicine; nurses; physicians; specialty; training; worldwide

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Comparison of Pelvic Fracture and Lumbar Spine Fracture Presentations in the Alfred Emergency and Trauma Centre

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Methods: Retrospective study during 12 months of patients with a pelvic fracture (PF) or a lumbar spine fracture (LSF). Patients were classified into one of four groups: Group A Isolated PF – only one fracture in the pelvis and no other significant injury

Group B Major PF – fractures in two or more separate sites in the pelvis or fracture in one site with hip dislocation or PF and injury \geq AIS 2 in other body regions

Group C Isolated LSF – single LSF and no other significant injury

Group D LSF in two or more vertebrae or LSF and injury \geq AIS 2 in other body regions (excluding PF)

Results: There were 39,005 presentations over the 12 months: 146 patients with a PF, with 27 in Group 1 (6M, 21F, mean age = 77 years) and 119 in Group B (78M, 41F, mean age = 43 years). There were 42 patients with a LSF, with 15 in Group C (10M, 5F, mean age = 50 years) and 27 in Group D (19M, 8F, mean age = 40 years).

Group No	CerSF	ThorSF	LSF	PF
A 27	-	-	-	27
B 119	6	4	13	119
C 15	-	-	15	-
D 27	1	5	27	-

Group	Coagulopathy	ISS	LOS	Death
A	0	7 \pm 3	14	3
B	16	20 \pm 12	18	9
C	0	4 \pm 1	11	1
D	0	19 \pm 10	22	1

CerSF = cervical spine fracture; ThorSF = thoracic spine fracture; ISS = injury severity score with the values being mean \pm ST; LOS = mean length of inpatient stay (in days)

The major injury mechanism for each Group was:

Group A Fall from a low level (55%)

Group B Motor vehicle accidents (81%)

Group C Falls (50%)

Group D Motor vehicle accidents (41%) and fall from a height (41%)

Conclusions: PF (either isolated or major) was two to three times more common than LSF. Falls were the most common mechanism in Group A, Group C, and Group D.

The combination of PF and LSF in the same patient was uncommon (13 out of 119 Group B patients). The mortality in major PF was double that seen in major LSF.

Keywords: lumbar spine fracture (LSF); mechanism of injury; mortality; pelvic fracture (PF); thoracic spine fracture

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Disaster and the Neurosurgeon's Role

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Triage for the neurosurgeon is a misnomer. The neurosurgeon's role within a mass casualty situation is one of a subspecialist surgeon instead of a triage officer. Unfortunately, because of the events of 11 September 2001, civilian neurosurgeons and other medical specialists have been questioning their roles in a mass casualty situation or in a situation created by biological, chemical, or nuclear weapons. There is no single triage system used exclusively within the United States. Different systems have differing sensitivities, specificities, and labeling methods. The purpose of this article is to discuss varying aspects of triage for both military personnel and civilians, and to suggest how the neurosurgeon may help shape this process within his or her community. The effect of biological, chemical, and nuclear weapons will be discussed in relation to the triage system.

Keywords: neurosurgeon; role; trauma; triage

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Applying Hospital Deployment for Emergencies in Real Events

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During the last decade, the Tel Aviv Sourasky Medical Center (TASMC) coped with tens of mass casualty events (MCE). These events raised the scope and intensity of disaster planning and preparation and outgoing activities in order to assure optimal and professional, and almost automatic, medical response. The tool that resulted assessed multiple factors such as:

- Expansion of manpower resources and training
- Standing orders and protocols
- Predesignation of admitting sites
- Availability of the staff

These factors were tested and evaluated during the Dolfinarium MC in June 2001. Initial notification activated the necessary activities such as:

- Summoning the professional staff
- Evacuation and preparation of the admitting sites in the ER
- Opening the Information Center
- Opening operating theaters
- Psychiatric services, etc.

These activities enabled efficient and professional medical treatment to the 56 casualties, some of them in a very severe condition, who were admitted in a very short time.

Summary: Unfortunately, each MCE such as the Dolfinarium MCE, provides the opportunity to check in real time, the hospital deployment plan, and to apply the necessary changes for the future.

Keywords: deployment; evaluation; hospital; mass casualty event; notification;

planning; plans; responses; testing
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High School Students Assist a Hospital in Mass Casualty Events

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Objective: The Israeli Medical System is committed to administering optimal medical services to casualties during conventional and nonconventional mass casualty events (MCE). The operation of the hospital in such events requires the expansion of facilities, predesignation of admitting sites, and operation of special roles.

Methods: Ancillary and voluntary teams are needed. This hospital initiated a model cooperation program with a neighboring high school. Approximately 300 students from the 10th to 12th grades are integrated into the hospital personnel during a MCE. The students serve as stretcher-bearers and carry out other necessary tasks. Once a year, the students participate in a training program and drills.

Results: As a result of the ongoing relationship over the last 10 years between the hospital management and the director of the school, the students are available to help every moment, throughout the whole year. This project has been supported by the Municipality Emergency law and recognized by the army and the Ministry of Health.

Conclusion: This unique model has many benefits to the community and to the hospital, but mainly for the students themselves. The most important education a student can receive is the ability to contribute to others.

Keywords: auxiliary personnel; drills; high schools; hospital; management; mass casualty events; students; training

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The British Red Cross Society

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The British Red Cross Society (BRCS) is a nationwide organization of volunteers who provide aid and assistance in a wide range of spheres. Although recognized for first-aid skills, the association provides many other caring services such as escorting patients, welfare services, counseling, and a unique camouflage service, provided by 225 practitioners. Started as an aid to scarred military casualties in the Second World War, it now sees more than 6,000 patients each year.

The BRCS has an active International Division, which is part of the largest humanitarian organization in the world. As part of the Federation of Red Cross and Red Crescent Societies (175 national societies) and as a partner of the International Committee of the Red Cross (ICRC), it is a key partner in the Strategy 2010 — "To Improve the Lives of Vulnerable People by Mobilizing the Power of Humanity." The BRCS has teams working in many countries throughout the world.

This paper examines the diverse work of the organization, and how it can work together with the World Association for Disaster and Emergency Medicine to work toward the goals of Strategy 2010.

Keywords: assistance; British Red Cross Society (BRCS); first aid skills;

International Committee of the Red Cross (ICRC); Strategy 2010; World Association for Disaster and Emergency Medicine (WADEM)
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Requirements Generation for Individual Protective Equipment

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Historically, the development of equipment that protects individuals from nuclear, biological, and chemical (NBC) threats has been a military endeavor. Although civilian versions of similar equipment have long been available, the technology has been driven by military requirements. However, NBC and industrial hazards are a growing public health concern, and the civilian need for individual protective equipment (IPE) soon will outstrip military demands.

Although development efforts rarely have worked in tandem, civilian and military IPE needs have a great deal in common. We have identified key requirements that apply to the development of both civilian and military IPE, emphasizing low-cost, low-maintenance, easy-to-use, reliable solutions with the capability for performance upgrades. This emphasis enables civilian use, including use in less industrialized areas, where training and material support may be nonexistent. The capability for performance upgrades allows enhancements for rigorous military use. For instance, the current United States military project to develop a disposable NBC hood will result in two versions, a civilian-style hood for escape and an upgraded model that will allow users to conduct military missions. Overarching requirements will conserve resources during design and manufacture, and will aid in the effort to create industry standards.

Increasing accessibility to quality, low-cost IPE will help prevent mass casualties during terrorist or industrial disasters, whether they occur in New York City or Bhopal. By combining common goals and rethinking approaches to equipment design, we will better serve both civilian and military populations.

Keywords: accessibility; biological; chemical; design; hazards; individual protective equipment; military; nuclear; requirements; standards

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Respiratory Sinus Arrhythmia Feedback for Enhanced Parasympathetic Responses in Clients Diagnosed with Post-Traumatic Stress Disorder and Anxiety: A Case Study

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We live in a world of hazards, with increasing terrorism activities, natural disasters, and personal trauma. Post-traumatic stress disorder (PTSD) and anxiety-related disorders are part of modern society. The anxiety response is one of the mechanisms the body uses to help the mind recognize danger and minimize it. As with most psychological disorders, it is not the presence of anxiety that creates problems, it is more about how severe it is, how the individual copes with it, and how much it disrupts the individual's ability to