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Rambam Health Care Campus
THANK YOU!
WE STOPPED ASKING IF... THE QUESTIONS ARE WHERE AND WHEN

Pre-hospital Aspects
Medical Aspects
Logistical Aspects

Rambam Health Care Campus
July 2006
Treated the casualties of Second Lebanon War under a constant rocket attack.

Hospital Under Attack

Arriving at Rambam’s Emergency Department: 849
Hospital Admissions – 281
Civilians – 66
Soldiers – 213

Transfers from other hospitals – 25
Foreign worker and U.N. soldier – 2
Deceased – 2 Soldiers, 3 Civilians

Demographics
Availability of ambulances
On-Call teams
Ambulances at home
Response time decreased
Paramedic > E.M.T.

“Scoop and Play”
Right Patient to Right Hospital
Avoid secondary transfer

Source: Hirshberg A, et al J Trauma, 2005
Immediate notification:
- Occurrence
- Location
- Mechanism of the event

EMJ representative in hospital informs on patient flow

PRE-HOSPITAL ASPECTS
- 35% injured arrived at the hospital in the first 10 minutes
- 65% arrived within 30 minutes
- The first admitted patient with ISS>16 arrived 5 minutes from time 0

MEDICAL ASPECTS
Understanding the unique pathology of this special kind of injury mechanism

Thousands of 2-3 mm metal pellets
Hospital response system
- The nature of the event dictates -
- Patient evacuation E.D., O.R., I.C.U.
- Increase staffing demands

Hospital mobilization and deployment - Contingency plan
- Surge capacity required for every event

PATIENT EVACUATION
STAFF RECRUITMENT
EQUIPMENT SET
- UP
SETTING OTHER TREATMENT AREAS
IMAGING DEPARTMENT ORGANIZATION
HOSPITAL TEAM ORGANIZATION

Emergency Storage Room
- The event might happen 3 minutes before the casualties enter the E.D.

Equipment trolleys: Orthopedic trolley
procedure trolley

- Continuity of limited mass casualties
- About 35 patients per scenario
- 35 trauma bays ready 24/7 - manpower and equipment
The Second Lebanon war - Equipment set 24/7 ...

The Second Lebanon War
Dividing the treatment site

Physical trauma  Mental trauma

help the team to organize and give focused care

Anxiety Site
DEBRIEFING
LESSONS LEARNED
ACTION TAKEN
QUALITY IMPROVEMENT CYCLE

STR - EXTENSION

NEW FORTIFIED EMERGENCY ROOM

11 bays in M.C.S.
LOGISTICAL ASPECTS

Lessons learned - spread NATIONALLY

Acute Stress Reaction

Victims and Bystanders and Staff

SAVE THE SAVERS !!!

Mental Treatment

LOGISTICAL ASPECTS

MANAGEMENT AND CONTROL

Hospital headquarters

• Special computerized software
  Administrative
  Clinical

• ADAM PROGRAM – for unidentified patients
Administrative Needs
Requirements of Management and Staff
- Situations, Wards, Injury severity
- Transporting patients from ward to ward and changes in injury severity

Clinical Needs for Managing the Event
Requirements of Trauma Unit
- Admission details, Place in ER, Injury, Missing consultants, Need for imaging resources, Need for OR, In-patient wards, In-hospital transport

Drill down per:
- Department
- Type of injury
- Severity
- Demographics
Patient photographs

Computerized program – connection

A national system for disseminating information on victims during Mass Casualty

Rapid connection to all hospitals

The information can be extracted immediately by:

- Hospital Information Center
- Ministry of Health
- Police Forces
- City Council Information Center
- National Medical Forensic Institute
Session #46

LIST PATIENT DETAILS

Session #47

NATIONAL LIST OF PATIENTS

LOGISTICAL ASPECTS

Team Education
Debriefing

Start Immediately

Identifying the system’s strong points AND pinpointing pitfalls and errors in the process

Judge performance according to guidelines and protocols.

LOGISTICS MEDICAL

Debriefing

The Process
Standardized Structured

Include Measurable Indicators – phases, outcomes

The debriefing should be objective, open-minded, not judgmental, and with full transparency

There is no “right or wrong”
Expanding the Shock Trauma Site from 3 beds to 7 beds was needed.
Expanding the Shock Trauma Site from 3 beds to 7 beds was needed. Opening a site in the Imaging Department reduced the load in the E.D. and allowed a one-way path for the injured.
Establishing a separated Delayed Site permitted treating only moderate to severe injuries in the E.D.

EXPANDING THE ROLE OF THE BLOOD BANK REPRESENTATIVE IN THE EMERGENCY ROOM
Hospitalization - establishment of a Multiple-Injured Admitting Department managed by representatives of all the surgical wards helped in pooling of resources.

Systematic visits of the Trauma Unit Team assisted in coordinating treatment.

TRAINING PHYSICIAN-NURSE TOGETHER AS A TEAM
Lectures

• Mass Casualty Life Support
• Team Work
• Computer Based Simulation

Hands-On Simulation Training

Drilling your own staff in home environment

Recruited teams
Emergency Department

Recruited Nurses for re-enforcement of the E.D.

ON-GOING EDUCATION OF MEDICAL TEAMS

Emergency Department

Recruited Nurses for re-enforcement of the E.D.

TABLE TOP DRILL

Pre-Hospital   Hospital   Toxicological
Protecting strategic sites
LOGISTICAL ASPECTS

Combined underground in-patient site
Transferring wards

LOGISTICAL ASPECTS
SECOND LEBANON WAR
Transfer of patients to center of country
New spaces in the hospital
Protect patients and families
Short rounds for the evacuation teams

PREPARING FOR THE FUTURE
New top priority construction projects:

- Protected emergency department
- 1800 fully protected (against conventional & non-conventional weapons) hospital beds in the new parking lot
GLOBAL TERROR AND WAR AND DISASTERS

NO ONE IS IMMUNE
EFFICIENT PERFORMANCE IS THE
OF CONSTANT TRAINING AND ORGANIZATION

THANK YOU
HOPE FOR PEACE
NO NATURAL DISASTERS
A LOT OF JOY AND HAPPINESS

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