EMERGENCY

WAR TRIAGE AND MASS CASUALTY

MASS CASUALTY IS

Massive Number of Casualties

that exceed the routinely resources of our hospitals or our health care facility

DEFINITION AND PRINCIPLES

- The process of sorting victims in order to increase the number of survivors
- Tightly related to a mass casualty situation (mascal)
- In a mascal the normal routine operative capacity of a particular facility is overloaded
- Triage is instituted to control a chaotic situation

MASS CASUALTY MANAGEMENT

MASS CASUALTY PLAN CAN NOT BE IMPROVISED!!!

MASS CASUALTY PLAN MUST BE PRE-ORGANIZED, NOT LEAVING ANY DETAIL FOR DISSCUSION OR PERSONAL INTERPRETATION

KEY POINTS

- CANNOT BE IMPROVISED, PREPAREDNESS IS ESSENTIAL
- EVERY FACILITY DECIDES A THRESHOLD FOR STARTING A MASCAL PROCEDURE
- THE TRIAGE OFFICER IS THE **ONLY** PERSON (WITH RECOGNISED AUTHORITY) IN CHARGE OF TRIAGE
- IT IS A DYNAMIC PROCESS
- THE AIM IS TO MAINTAIN CONTROL OVER A SITUATION OF CHAOS
- EVERY MEMBER OF STAFF HAS A DESIGNATED FUNCTION

HOW AND WHEN DO WE START

MANY POSSIBILITIES:

- HEARING THE EXPLOSION
- INFORMATION FROM OUR FAPs
- INFORMATION FROM INSO
- INFORMATION FROM OTHER HOSPITALS
- INFORMATION FROM FIRST COMING PATIENTS
- INFORMATION FROM POLICE OR AUTHORITIES
- ETC. ETC.

SECURITY ISSUES

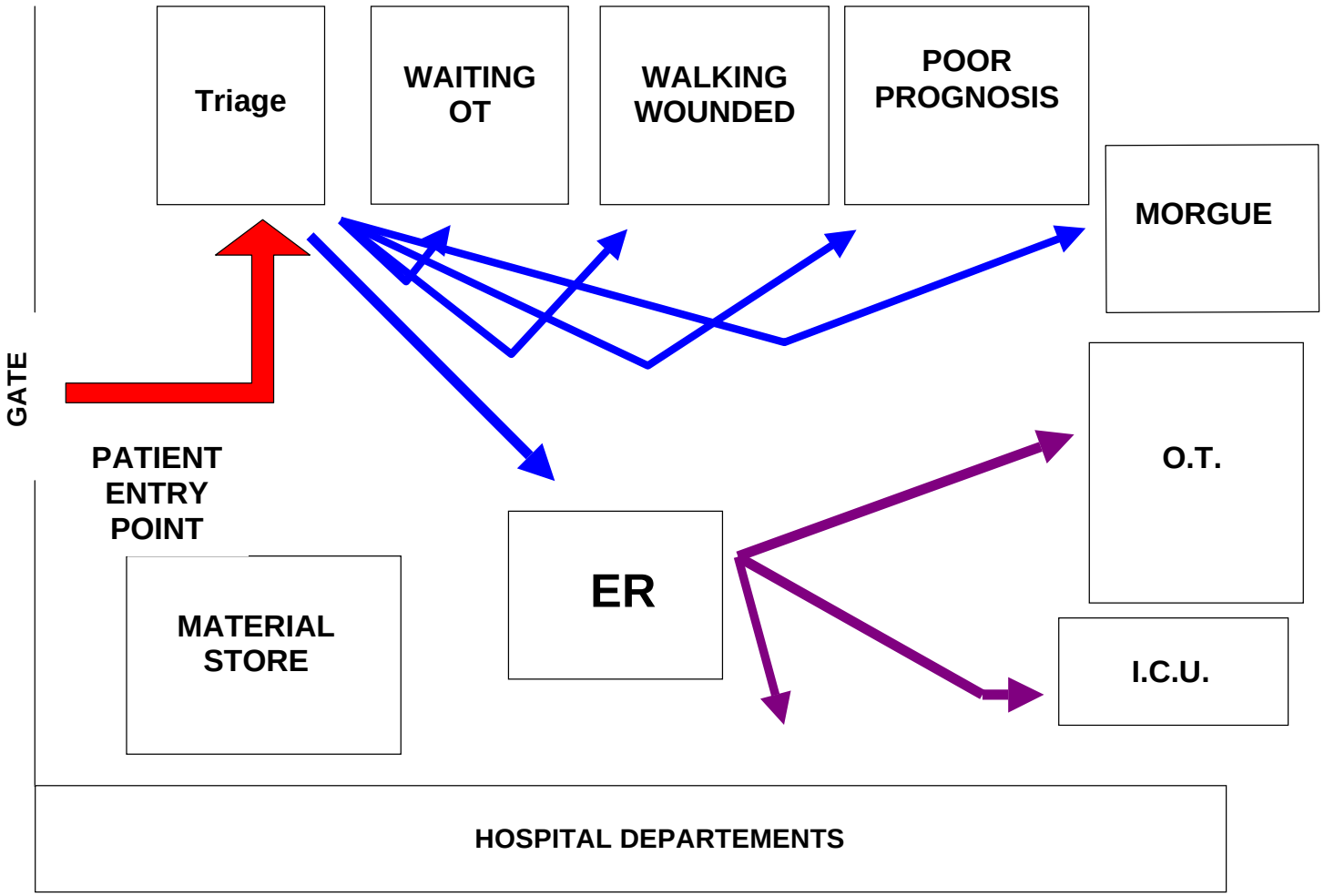
- SECURITY PROBLEMS HAVE TO BE ANTICIPATED (POLICE/AUTHORITIES)
- ADEQUATE AREAS **OUTSIDE** THE HOSPITAL FOR THE MOVEMENT OF VEHICLES AND AMBULANCES
- ANY UNNECESSARY CONCENTRATION OF “TARGET PEOPLE” SHOULD BE AVOIDED
- **WEAPONS ARE OFF-LIMITS WITHIN THE HOSPITAL**

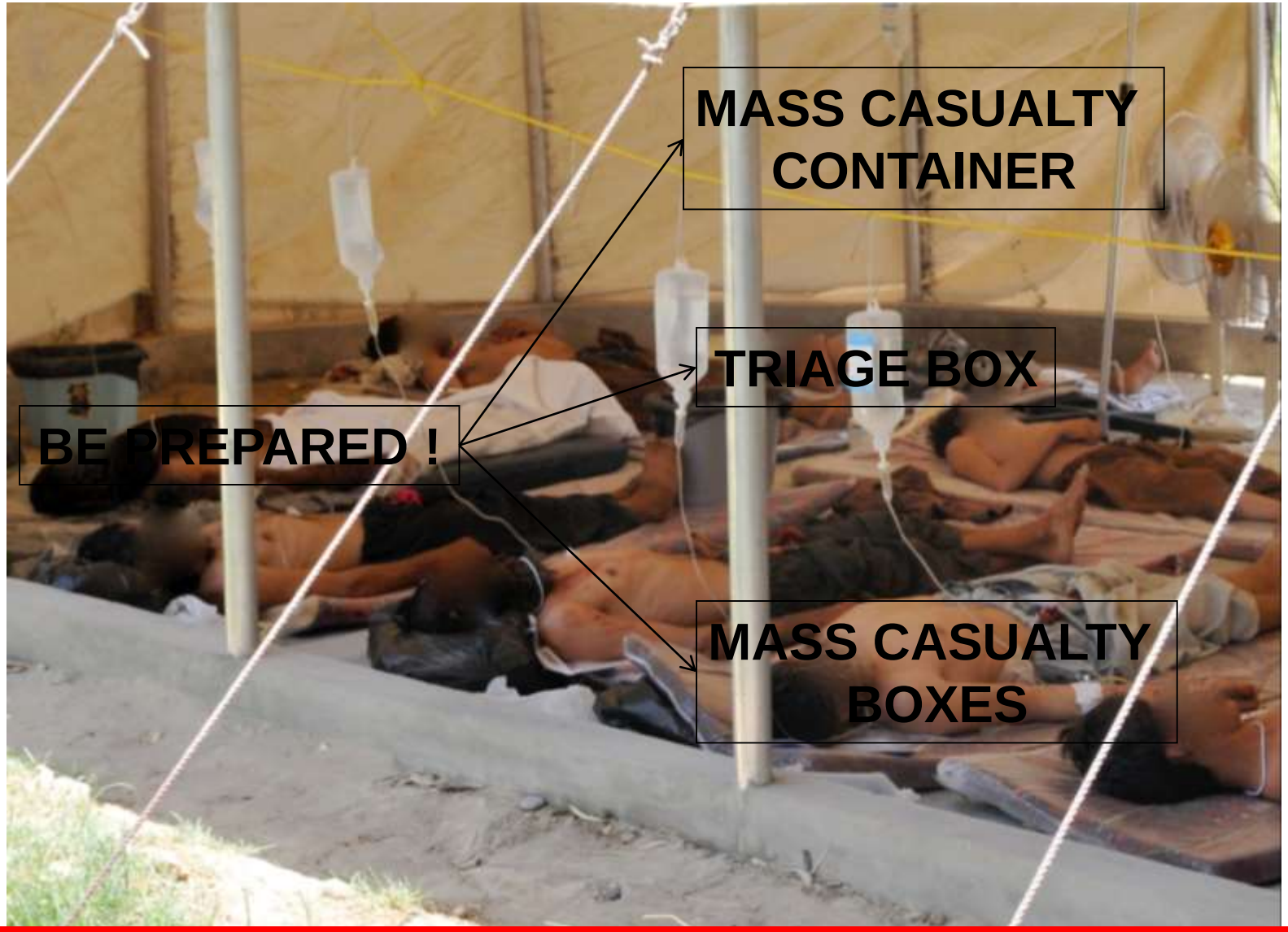
SECURITY ISSUES

ENTRANCE GATE ORGANIZATION

- PATIENTS ARE UNLOADED FROM VEHICLES
- BROUGHT INSIDE HOSPITAL PERIMETER BY STRETCHER

MASS CASUALTY MANAGEMENT





TRIAGE AND MASCAL BOXES ARE STORED IN OPD AND CHECKED MONTHLY

MASCAL CONTAINER

THE MASCAL CONTAINER IS CLOSE TO GATE
AND
TRIAGE AREA (KEYS FOR CONTAINER IN MAINTENANCE AND OPD)

MASCAL CONTAINER CONTENT

- BLANKETS x60
- MATRESSES x50
- BED SHEET x 120
- IV HOOKS x50
- SHARPS' BINS x4
- PILLOWS x50
- TORCHES x5
- ROPES x2
- STRETCHERS x10
- PLASTIC BAGS x3kg
- PLASTIC ROLLS
- ELECTRIC STOVES x3

TRIAGE BOX

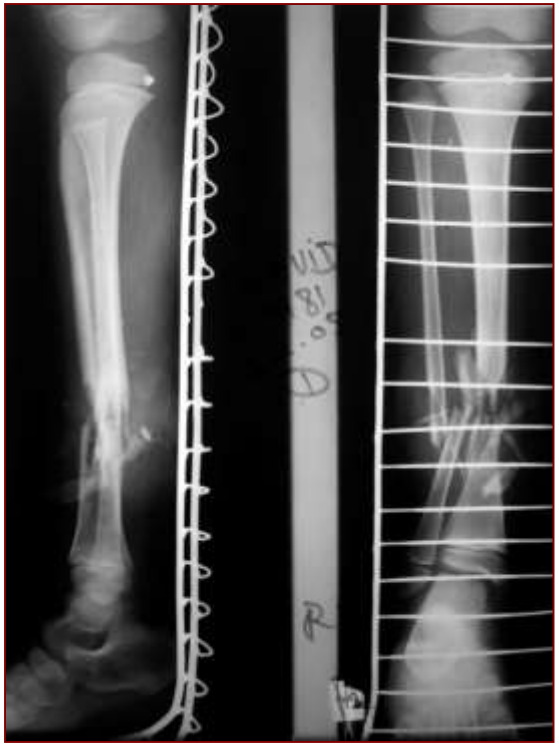
CONTENT:

- Patient tracking list x5
- Triage cards x100
- Gauzes x50
- Gauze bandages x24
- Elastic bandages x36
- Gloves x100
- Scissors x2
- Stethoscope x1
- Permanent marker x1
- Tapes x2

All boxes have **dockets**

FLUIDS AND SPLINTS

- ONLY RINGER/LACTATE
- 4 BOXES OF 20 LIT IN OPD
- PHARMACY CAN PROVIDE MORE (KEYS OF PHARMACY ARE KEPT BY A DESIGNATED PERSON)



ONE MODEL SPLINT: KRAMER

TRIAGE

DEFINITION

Triage means sorting and treating patients according to priority, which is usually determined by medical need, staff available and resources available

(http://www.steinergraphics.com/surgical/006_16.3.html)

Triage is a dynamic equilibrium between needs and resources:
•needs=number of wounded and types of wounds;
•resources=facilities at hand and number of competent personnel available

(Giannou, C, Baldan, M *War Surgery, 2010)*

MASS CASUALTY MANAGEMENT

TRIAGE AREA

PLACE WHERE IS DONE THE INITIAL TRIAGE OF THE PATIENT'S

STAFF:

- TRIAGE OFFICER (TO)
- NURSES
- PORTERS
- ASSISTANT

TRIAGE OFFICER

- ONE AND ONLY IN COMMAND OF TRIAGE
- EXPERIENCED HEAD NURSE/ INTENSIVIST
- NEEDS AN ASSISTANT/INTERPRETER (PATIENT TRACKING LIST)
- **DOES ONLY TRIAGE**: ASSIGNS A CATEGORY TO EACH PATIENT (C1,C2,C3)

RECOGNISED AUTHORITY AND LEADERSHIP

TRIAGE CATEGORIES

C1	Immediate surgery	Airways obstruction, chest and vascular inj, abdominal or limb injuries associated with significant blood loss, any other impending or shock condition
C2	Wait for surgery	Abdominal injuries without signs of internal bleeding, fractures, traumatic amputation, head injuries with good prognosis
C3	No surgery	• A: poor chances of survival despite surgery • B: superficial injuries not requiring surgical debridement

C1

IN OUR HOSPITALS **C1** IS OUR OPD (A&E)
WITH 24/7 READINESS.
ALSO IN CHARGE OF OT LIST AND SECURING OF PERSONAL BELONGINGS OF PATIENTS

C2 and C3


CONTAINER
TRIAGE
C2
C3
KABUL


TRIAGE
C2
C3
KABUL


LASHKAR GAH
C2


C2
LASHKAR GAH

Category 1 Immediate surgery

Patients who, though seriously injured, stand a fair chance of "good survival"

Examples:

- **chest and vascular injuries**
- **abdominal or limb injuries associated with significant blood loss**
- **any other impending or early shock condition**

CLINICAL EXAMPLES

C1

BILAT PNX

C2

SUPERFICIAL STW

Category 2 Wait for surgery

Patients requiring operative procedures of any kind with good chances of survival and who are stable enough to wait for surgery.

Examples:

- **abdominal injuries without signs of internal bleeding**
- **open fractures, traumatic amputations**
- **head injuries with good prognosis**

AMPUTATIONS AND SUBAMPUTATIONS

C2

Category 3 NO Surgery

A. Patients not scheduled for OT because their injuries are associated with poor chances of survival despite surgery

Examples:
- irreversible shock
- head injuries with poor prognosis

B. Patients with superficial injuries not requiring surgical attention

patients with soft tissues injuries not requiring surgical debridement

CLINICAL EXAMPLES OF C3 / NO SURGERY

NO or SUPERFICIAL WOUNDS

D.O.A

Dead On Arrival

C3 NO SURGERY FOR DYING PATIENTS

PATIENTS WITH SUCH SEVERE INJURIES THAT THEIR CHANCES OF SURVIVAL ARE MINIMAL AND WOULD DENY SURGICAL RESOURCES TO A LARGE NUMBER OF PATIENTS WITH MUCH BETTER PROGNOSIS. THIS IS A PARTICULAR DELICATE ISSUE WITH ETHICAL CONSIDERATIONS AND CHARACTERIZES THE TRIAGE DONE IN A WAR CONTEXT WITH LIMITED RESOURCES FROM THE ONE DONE IN A MODERN TRAUMA CENTER WHERE THE GOAL IS TO OPTIMIZE TREATMENT FOR EVERYONE

GIVE THE BEST FOR THE MOST

C3 DEAD PATIENTS – DISPOSAL OF CORPSES

DEAD BODIES AS A RESULT OF TRAUMA DO NOT INCREASE THE RISK OF COMMUNICABLE DISEASES

A DIFFICULT TASK IS TO IDENTIFY AND TAG BODIES; TO THIS PURPOSE BODIES (AND PERSONAL BELONGINS) SHOULD BE KEPT IN A SUITABLE MORGUE (IDEALLY AT 4° C);

AVOID BURIAL IN MASSGRAVES AND ENCOURAGE CULTURAL AND RELIGIOUS OBSERVANCES

OPERATING THEATRE

MAIN SURGICAL PROCEDURES PERFORMED IN A MASCAL

EXPLORATIVE LAPAROTOMY

CONTROL OF BLEEDING
CONTROL OF CONTAMINATION
TEMPORARY CLOSURE

CHEST DRAIN

(CAN BE PLACED IN C1 TOO)

DEBRIDEMENT

STABILIZATION OF FRACTURES

AMPUTATIONS

LIFE AND LIMBS

DON’T FORGET !

- TRIAGE IS A ***DYNAMIC*** PROCESS
- PATIENTS ARE CONTINUOUSLY REASSESSED
- PATIENTS CAN CHANGE CATEGORY

DON’T FORGET THE REST OF THE HOSPITAL

- SURGICAL NURSE SUPERVISOR IN CHARGE OF D/C OR MOVING PATIENTS TO PREVIOUSLY DESIGNATED AREAS (LIKE PHYSIO DPT, MOSQUE OR PLAYROOM)
- OFF DUTY PERSONNEL IS CONTACTED
- ELECTIVE CASES SUSPENDED
- A MINIMUM NUMBER OF STAFF IS LEFT IN THE WARDS

CONCLUSIONS

PREPAREDNESS IS ESSENTIAL, DON'T IMPROVISE

TRIAGE OFFICER IS ESSENTIAL AND HIS AUTHORITY SHOULD NEVER BE QUESTIONED DURING THE MASCAL EVENT

STICK TO THE PLAN

KEEP IT SIMPLE !!

EMERGENCY