INTRODUCTION

A "disaster" is defined as "any occurrence that causes damage, ecological disruption, loss of human life or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area[1] Past few years were full of disasters. Laila in Andhra Pradesh in 2010, 26/11 Mumbai terrorist attack 2007, Cyclone Aila in West Bengal, Kosi flood in Bihar, Dec. 2004 Indian Ocean Tsunami, Hurricane Katrina in USA, wars in SriLanka are few examples. WHO and international partners are underscoring the importance of health infrastructure that can withstand hazards and serve people in immediate need. **World Health Day theme 2009** also talks about preparedness of hospitals to handle emergencies. i.e. **"Save lives, make hospitals safe in emergencies."** Hospitals would be among the first institutions to be affected after a disaster, natural or man-made. Because of the heavy demand placed on their services at the time of a disaster, hospitals need to be prepared to handle such an unusual workload.

PROBLEM STATEMENT

Chaos cannot be prevented during the first minutes of major accident or disaster. But it has to be the aim of ever disaster plan to keep this time as short as possible.

An appropriate and effective organization in the disaster area should result in

- The survival and recuperation of as many patients as possible
- A proportional distribution of patients to several hospitals

LITERATURE REVIEW

Hospitals, because of their unique mission, size, complexity, the type of materials they handle, and the types of patients they encounter, are especially vulnerable to natural and human initiated disasters.[2,3] Therefore each hospital must develop disaster prevention strategies, disaster control strategies and hospital response strategies. Containment and disaster control strategies are necessary for minimizing the effects of impairment and maximizing recovery effects. It includes infrastructure development and concise containment process. Organizations especially hospital, must develop containment infrastructure to deal

with the loss and damage of an event. Moreover, well defined procedures, the assembly of recovery teams and the availability of communication systems will ensure an efficient, coordinated and routine approach to containment and control damage.[4] Nowadays, human initiated disasters has also increased. It could be prevented through proper training, work designs.[7]

Conventional disaster planning refers to the administrative head of the hospital for leadership in critical incidents,[5] neglecting that immediate availability cannot be secured for 24 hours each day. Therefore alternative emergency plans should be developed describing leading functions with specified task to be assigned to various persons depending on the availability.[6]

PURPOSE OF THE STUDY

To formulate the Disaster Management Pan of a 350 bedded Super Specialty Hospital to fulfill the following:

a. **Preparedness (365 x 24 x 7) to manage a Disaster** situation by temporarily enhancing operational capacity
b. Identify responsibilities of individuals and departments in the event of a disaster situation.
c. Identify Standard Operating Guidelines (SOG's) for emergency activities and responses.

DATA COLLECTION AND METHODOLOGY

STUDY DESIGN

Focused group discussions was organized among the members of EMERGENCY PREPAREDNESS COMMITTEE of Asian Institute of Medical Sciences.

DATA COLLECTION PROCEDURE

- An overview of Hospital records which includes; Hospital Master plan, Manpower status, equipment & Inventory Status, Communication system
- On the basis of evaluated data, meetings of Emergency Preparedness Committee were planned & conducted to incorporate valuable ideas, experience & holistic views of the management.
- Facility Management rounds were conducted to absorb on-ground realities.
- Based on above all, a rough draft of Disaster Management Plan was formulated and presented in the meetings to further improve the plan.
- Drill was conducted to test the tentative plan.

TYPE OF DATA COLLECTED

- **Primary Data** – Focused group discussion(Emergency Preparedness Committee meetings), Facility Management Rounds
- **Secondary Data** – Hospital records (Hospital Master plan, Manpower status, and Equipment & Inventory status)

EXTERNAL DISASTER MANAGEMENT PLAN OF ASIAN INSTITUTE OF MEDICAL SCIENCES

Disaster Plan Committee Members

- Director – Medical Services
- Director – Admin & Purchase
- DGM - Operations & Quality
- Administrator
- Assistant DGM - Operations & Quality
- Mgr / Asst.Mgr Operations
- CNO
- Manager – Security
- HOD Neuro-Surgery
- HOD Orthopedics
- HOD General Surgery
- HOD Accidents & Emergency Dept
- HOD Medicine
- HOD Anesthesia
- Head of Human Resources
- HOD Laboratory Services
- HOD Imaging Services
- HOD Blood Bank
- Manager Front Office
- Manager Stores
- Manager Engineering
- Manager Housekeeping Services

Functions of the Committee

a. To establish and coordinate the Disaster Plan for the Hospital
b. Conduct Disaster Drills twice-a-year.
c. Debriefing after drill or disaster to be done next working day to review adequacy of response to disaster
d. To update the Disaster Plan accordingly

1. Various probable Scenarios identified:

a. Vehicular Accident (multiple trauma cases approx 30-50)
b. Fire Accident in large building (30 – 50)
c. Epidemics of Food-Poisoning and / or Gastro-Enteritis (>30)
d. Explosions
e. Plane Crash
f. Riots
g. Collapse of Building

GUIDING PRINCIPLE

The **Hospital will receive and manage a maximum of 30 - 50 patients** before diverting patient traffic to other partner hospitals and this would be informed to local government/municipal authorities including police & other nearby hospital, **the rationale being** the hospital can plan for & be prepared to efficiently manage up to 50 casualties & provide quality healthcare delivery, rather than accept a higher patient load & be unable to cope & deliver poor quality healthcare.

Estimated Patient Profile				
Number of Casualties	**Immediate care** - 20%	**Delayed care** - 30%	**Minor care** - 50%	**Expected Admissions**
50	**10**	**15**	**25**	**25**

2. ERCC – EMERGENCY RESPONSE COORDINATION & COMMUNICATION

This system is used in Asian Institute of Medical Sciences for communication and coordination during an emergency. The employees of AIMS can operate this system through mobile set / internet. When an emergency is detected by any employee (activator of that respective situation), he / she will call the emergency number and announce the code and location. Simultaneously all the responding members related to the announced code will get the call on their mobile set.

3. The Disaster Management Team:

	During Working Hours / Weekdays	**On Sundays / Holidays / Night-Shift**
1	Dir. Admin & Purchase	Manager/ Assistant Manager Operations
2	Dir. Medical Services	
3	Administrator	
4	DGM – Operations & Quality	
5	CNO	Senior Nurse-on-Duty / Night Supervisor
6	Mgr - Security	Security-Supervisor on Duty

	During Working Hours / Weekdays	On Sundays / Holidays / Night-Shift
7	Consultant,Emergency Medicine	Casualty Medical Officer (CMOs)
8	HOD Surgery	Surgeon-on-Call (**for Mass Trauma/ Explosion/ Fire Accidents**)
9	HOD Orthopedics	Orthopedic Surgeon-on-Call (**for Mass Trauma**)
10	HOD Medicine	Physician-on-Call (**for Epidemics / Food-Poisoning**)
11	HOD Laboratory Services	Lab Technician-on-Duty
12	HOD Imaging Services	Radiologist-on-Call
13	In-Charge Blood Bank	Blood-Bank Technician-on-Duty
14	HOD Anaesthesia	Anaesthetist-on-Call / OT-Technician-on-Duty
15	Asst. Mgr, Stores	~ x ~ x ~ x ~
16	OPD / IPD Pharmacy In-Charge	Pharmacist-on-Duty
17	Mgr, Maintenance	Maintenance Supervisor
18	Asst Manager Housekeeping	HK Supervisor-on-Duty
19	Manager Front Office	Front Office CCEs (**x 2**)
20	Telephone Operator(**s**)-CCE- on-Duty	CCE/ Telephone Operator-on-Duty

4. **Functional Areas:**

- **Receiving area - Emergency Ward**
- **Additional treatment area - Isolation Ward / Doctor's Lounge**
- **Command centre**
- **Information centre**
- **Discharge area**

a. **Receiving Area:**

- **Area allocation for casualties will depend on Numbers Expected and Hospital Occupancy.**
- Receiving area / **(Disaster Ward** for all casualties will be at designated area in **1) Emergency Ward 2) Area in front of MRD 3) Minus (-1) Basement Parking area)** where a **quick initial assessment** will be made to determine severity of injuries by **Triage**
- Two Trolleys & Two Wheel-chairs will always be kept on standby.

Priority-1 patients will be transported to the Emergency Dept. - Nurses to Manage & Security Staff to direct/escort

Priority-2 patients to Emergency Nursing Station &

Priority-3 patients to Surgical OPD Treatment Room.

b. **Additional Treatment Areas** For a maximum of 25 Casualties : (**Isolation Ward / 5th floor general ward / Doctor's Lounge /** -1,Basement / -2 Covered Parking Area)

c. **Command Center:** Emergency Call Centre will assume the function of command center, manned by

DMS / Dir. Admin. & Purchase / Administrator/ DGM – Operations & Quality / CNO

d. **Information Center:** To be managed by the **Mgr-Front Office** or **Mgr-Security** at the Main Reception.

Press & Police room to be created at area below ramps, along with any of the top officials.

e. **Discharge area:** Patients who have minor injuries will be discharged immediately from main reception entrance and **NOT** through the Emergency door.

5. General Duties of Department Heads

a. Keep current and available list of names & contact numbers of personnel of the Dept. at **ALL TIMES**.

b. Ensure that **Call Centre** has **up-to-date** list of names of persons on stand-by for Disasters (**365 x 24**)

6. INSTRUCTION TO PERSONNEL ON-DUTY

- All Staff to remain at their own departments unless re-assigned otherwise.
- Do not leave the hospital without permission.
- Keep **ALL** phone lines open.
- Accept transfer-of-station or duties **without question**.
- Stay on duty until relieved.

6.1 INSTRUCTION TO PERSONNEL OFF-DUTY

- Keep phone lines free.
- Do not call hospital
- If you are not called, come at your regular working hour.
- All personnel have to arrange for their own transport (Except – Nursing staff)

6.2 INSTRUCTION TO PERSONNEL WHO ARE CALLED BACK

- Report in as soon as possible/wear id cards/park at staff parking area
- Enter through side-entrance (**NOT** through the Emergency Dept.) & report to Command Centre

- If no duties are assigned, **WAIT** in the MRD area
- All personnel have to arrange for their own transport (Except – Nursing staff)

7.0 THE PROCESS

Initial Response; Notification and Alarm

- Hospital might receive intimation / information of disaster from Municipal Authorities and / or Police
- Information may be received by **DMS / Dir. Admin & Purchase / Administrator / DGM – Operation & Quality / Call Centre / CMOs** / **Asst Mgr Admins**
- **Alert for Disaster Activation only after** Top Officials have been informed, confirmed & have ordered accordingly
- The Call-Centre will announce the "Code Orange" on **ERCC** & the **PA System**
- Call Centre will inform the members of the Disaster Mgmt Team as required
- Soon after the announcement the disaster mgmt team members will arrive in the assigned areas.

7.1 Command Post

- Command post will be set up at the Emergency Call Centre / **Optional**
- Allot different ID Sequences at different areas (viz Casualty X-1, X-2 / Reception R-1, R-2 etc)
- After hospital disaster management capacity is full, Security personnel at Hospital gates along with Supervisor / Police will direct all fresh patients to other hospitals.
- DMS / Dir. Admin & Purchase / Administrator / Med. Administrator / Mgr-Front Office / Head-Safety will organize materials & mobilize manpower
- All Nursing-in-Charges (DAY)/Team Leaders (NIGHT) will report to **CNO/ Nrsg-Shift-Supervisor** at Comd. Centre
- All departments (**Triage** / **OTs** / **Front Gate**)- to constantly update Command Centre as relevant.
- Oversee the ER process & coordinate gathering extra staff (**Doctors/Nurses**) at Emergency/Triage area

- Post-ponement of Elective operations
- Make OTs available (**Inform Anaesthetist- on-Call & OT-Technician-on-Duty**)
- In-case of non-availability of beds, lay out mattresses in a temporary dormitory fashion to establish a **Disaster-Ward/ Main Reception)**under supervision / directions of CNO / Nursing-Shift-Supervisor
- Arrange setting up of Communication centre at **Emergency Commd Post** / **Main Reception** to liase with relatives/police/blood bank etc
- Authorize & ensure restrictions on visitors
- Handover duties at end of working shift
- Decide & declare "**all clear**" only when situation is under control

7.2 Information Center

- To be set up at the Main Reception
- To be handled by Manager – Security / Manager-Front Office
- Press and Police room setup to be created at area below ramps
- One person (amongst the top officials) will talk to press (to avoid spread of rumors).
- All departments (Emergency/ Wards/ OTs / Main Gate) to update Command Center as relevant.
- Command centre will update top officials at regular intervals.
- Phrase for others to say to any person "No Comments"/ "Trying our best"
- Deal with family and friends of victims

7.3 Communications protocol

- During a disaster all communications between members of disaster team will be through the use of Mobiles
- All department heads to have a specific & limited no. of disaster team members to call.
- These team members in turn will have a specific list.
- No personal calls will be made.
- Calls regarding information about **Next of Kin** will be diverted to Command Centre

7.4 Reception Area for Victims

- CCE/ Nurses (with lower workload) will note down demographics & allot **Disaster ID Numbers** (X-1, X-2, R-1, R-2 etc) on **Triage Tags** (**which will be hung around each Casualties' neck**)
- **ALL** patients to be treated as Medico-Legal Cases (MLCs)
- **ALL** Deceased cases & Brought-in-Dead will be identified & tagged – Examined by Doctors / Declared Dead by Doctors / Death Summary + **Form 2** to be filled
- Under supervision of Security Supervisor / HK-Supervisor - Wardboys will **shift** dead bodies to the Mortuary + Hand-Over Dead-Body to Police – **update** Command Centre - Next of Kin to be **notified** by Senior at Commd. Centre
- When the Mortuary Trays are full, the bodies will be kept on side on Slabs and additional body would be kept at Amphitheatre (**Ice is to be arranged by HK-Supervisor**).
- **Documentation** is to be **BRIEF / ESSENTIAL / SIMPLE / STANDARDISED** – viz **TRIAGE TAG** & wherever possible **back-up by Photographs of Casualties**
- Registers also should be kept in Emergency Dept. which are to be filled initially and later can be updated on HIS.

7.5 Emergency Room Triage

Emergency Doctor-on-Duty will notify the ER team; Casualties will be classified into 3 categories.

- **CARE OF PRIORITY 1 – IMMEDIATE RESUSCITATION - THIS TYPE OF CASUALTY INCLUDES:**
  - Major hemorrhages ± Rapidly progressive shock.
  - Respiratory distress – mechanical ventilation, unstable airway / Severe smoke inhalation
  - Traumatic Brain Injury with Coma

- Penetrating wounds to head / neck / chest / abdomen / groin / extremity with neuro-vascular compromise
- Compound fractures / Crush injuries
- Extensive burns (more than 30%)
- Cervical & Maxillo-Facial injuries / Spinal cord injuries / Open or Un-Stable Pelvis fractures
- Judgment of the ED Physician

The following actions are recommended:

- Primary Survey (Secure **A**irway / **B**reathing / **C**irculation)
- Oxygen administration / IV Lines / Intubation / Secondary Survey
- Advanced Life Support / Resuscitation / Transfer to SICU or NS-ICU
- Patients who require Urgent **Limb-Saving** or **Life-Saving** Surgery :
    - Identify them
    - Refer for Urgent-**PAC**
    - Get on-the-Spot Consent by **Next-of-Kin** or Dir. Med. Services / DGM - Operations & Quality / CMOs
    - Blood Samples taken & sent to Lab
    - Admission by Bedside
    - Change of Clothes on bed / trolley
    - Transfer to O.T. for Surgery

(BASIC RULE: EMERGENCY SURGERY NOT TO BE DELAYED FOR PAC / LAB REPORTS / NIL ORAL STATUS)

- **Care of priority 2 Casualties: Urgent Treatment –**

  The injuries have systemic implications or effects, but patients are not yet in life threatening shock or hypoxia although systemic decline may ensue, given appropriate

care, can likely withstand a 45 to 60 minute wait without immediate risk. These casualties injured can be placed under shelter pending transportation.

This type of casualty includes:--

• **Non-asphyxiating Thoracic trauma** • **Closed Single/ Multiple fractures of the extremities** • **Head Injury without Coma / Shock** • **Altered level of consciousness with Glasgow Coma Score 9-13**		• **Injuries to Soft Parts** • **Traumatic amputations** • **Judgment of the ED Physician** • **Limited burns (< 10 - 30%)**

- **Care of Priority 3: Minor Care Casualties**

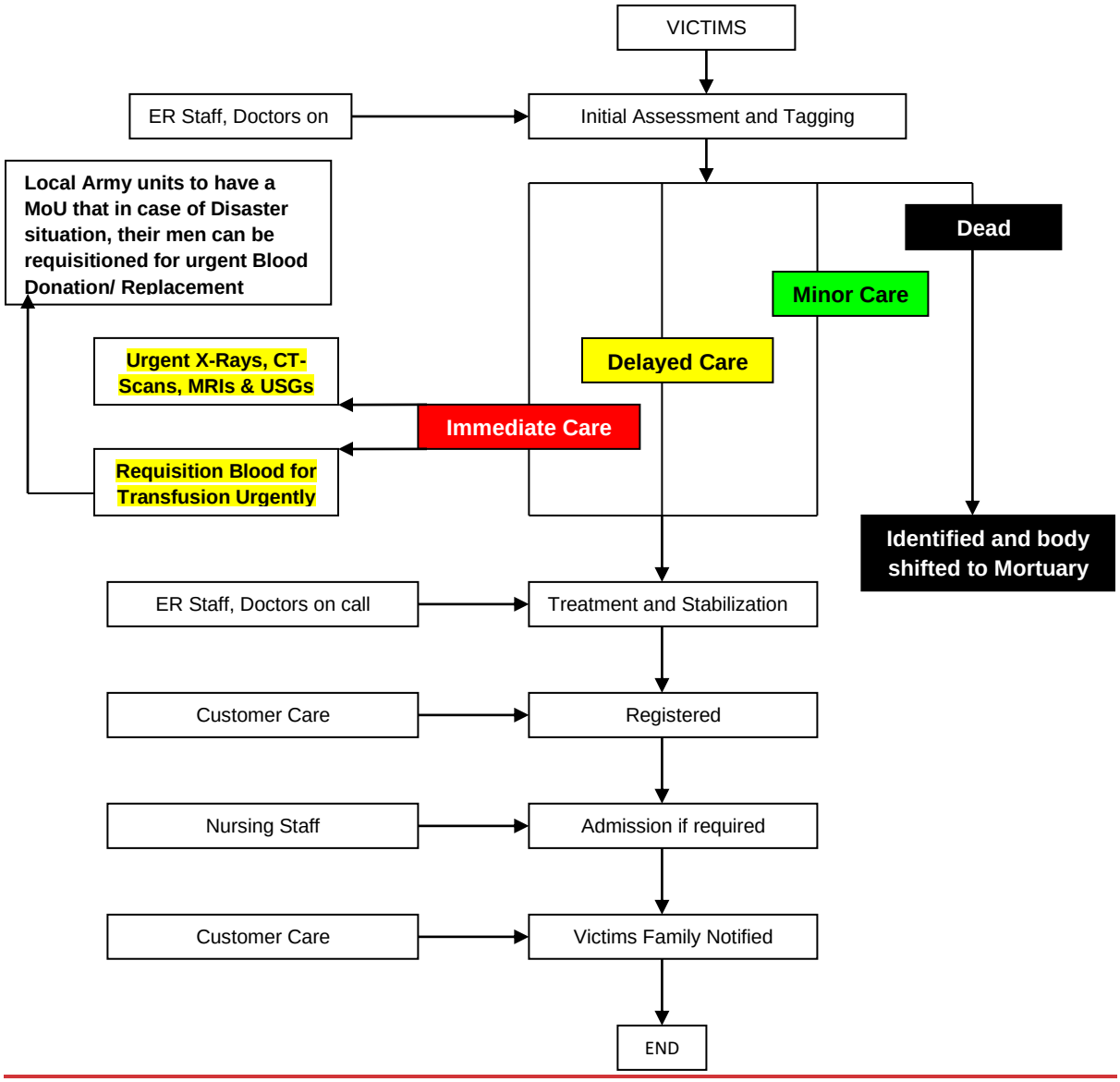
  Injuries are localized without immediate systemic implications; with a minimum of care, these patients generally are **UN**-likely to deteriorate for several hours, if at all.

  - This type of casualty includes minor injuries only.
  - Usually **managed by 2 or more RMOs / Junior Doctors** (brought in from Wards)
  - Basic First-Aid / Dressings / Suturing / Analgesics are given

- **Dead :** No distinction can be made between clinical and biologic death in a mass casualty incident and any unresponsive patient who has no spontaneous ventilation or circulation is classified as dead.

ORGANIZATION OF MOCK DRILLS: to be organized every 6 months by Dir. Med. Services / Dir. Admin & Purchase / Medical In-Charge and simulated with all departments involved.

7.6 Triage Process



<u>TRIAGE PROTOCOL</u> – <u>Document in Traige Card</u> (Refer Annexure 1)

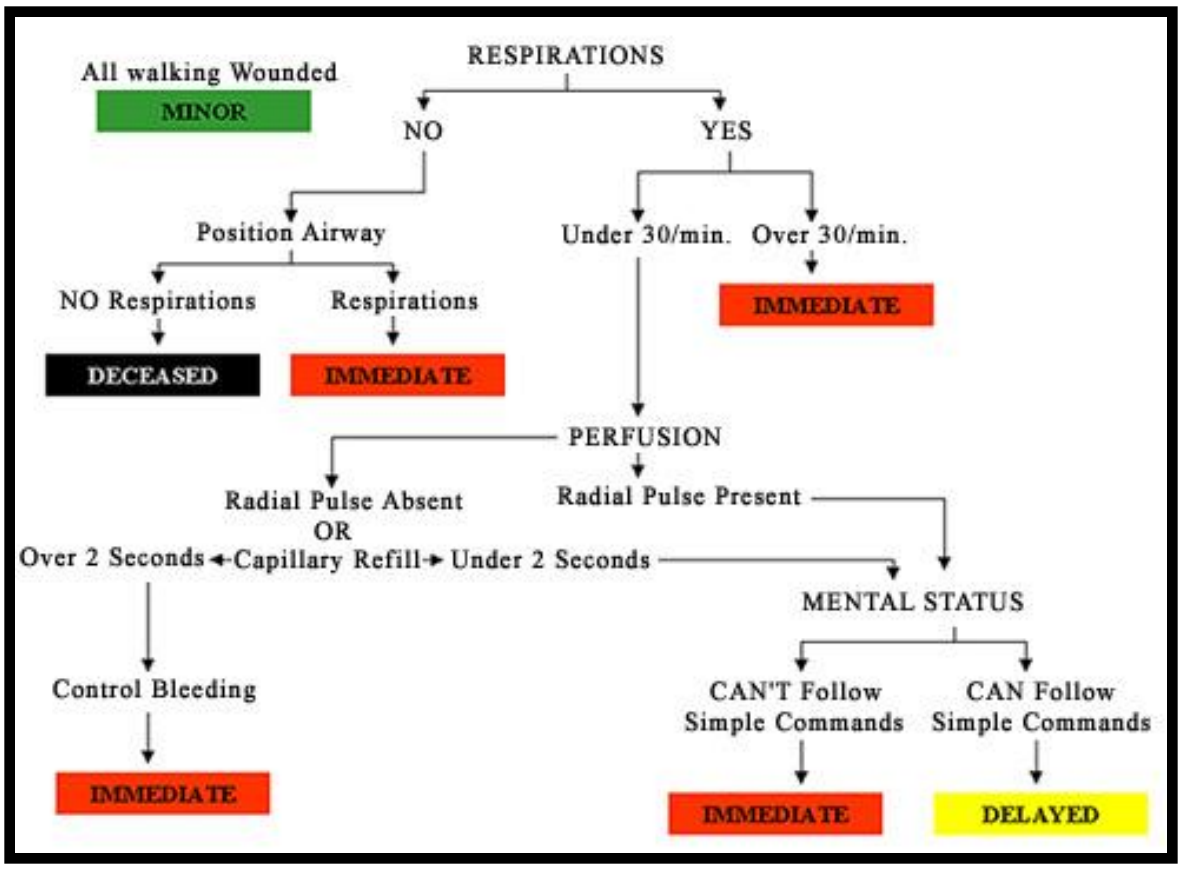
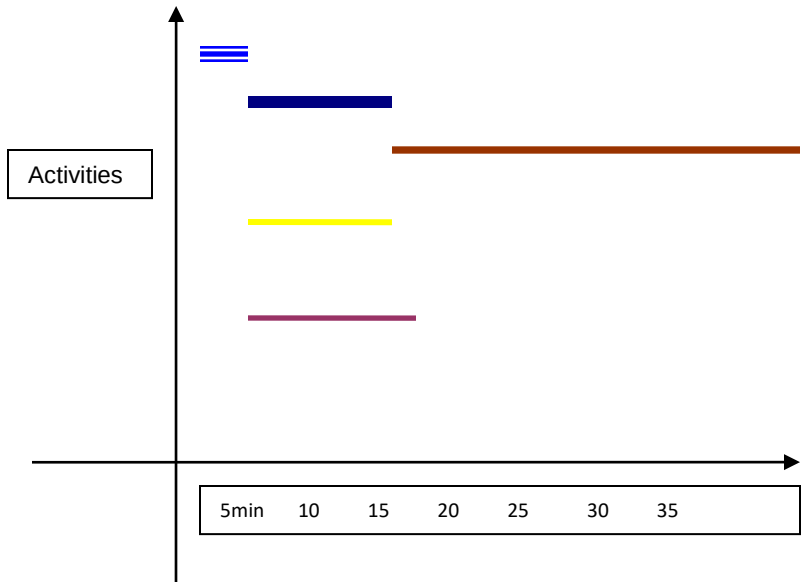


Fig.3

Fig.3 shows the flow of patient traffic during a disaster. Victims will be brought in through the front entrance, and triaged in the reception area. Victims are then sent to the respective red, yellow or green areas. Victims whose injuries are of a serious nature may be transported directly to the OTs.



Gantt chart Showing Sequence Of Events

This represents the initial response and time taken for dissemination of all available information to Department Heads.

This represents time taken for Command center to be established and Facilities and security staff to clear the Nurse station 2 OPD floor area and evacuate OPDS 14 to 19.

This represents initiation of triage and treatment.(10 min from initial notification)

7.7 Emergency Materials

- Standard **Disaster Management Packs(atleast 10)** to be kept ready at store – contents to be decided by Trauma / Nursing viz. (**IV Sets / Syringes / Needles / Dressings / Splints / Aprons / Disposable Sterile sheets etc**)

- Active rotation of these emergency packs to be done every 90 days (to avoid expiry loss) until emergency arises.
- Quick Supply System to be activated
- Following stores to be procured & kept in Reception Lobby + Disaster Ward + supplement Emergency Dept:
-

Medication	Equipment
• Inj Ceftriaxone - 50 • Inj Metrogyl – 50 • Inj TTD – 100 • Inj Tramazac – 100	• Splints-50 of all sizes including Thomas Splints / Pnuematic Splints / Krammer-Wire splints . • IV Stands – 10 (2 from each unit) • Ventilators – 2 (1 from each ICU)
• Inj Diclofenac – 100 • Silverex Burn Ointment – 40 tubes • IV Fluids; RL, NS, DNS, • Blood and Blood products (SOS	• Cardiac Monitors – 4 (from ICUs) • Crash Carts – 4 (from TMT / ER / ICUs) • Dressing sets - (CSSD) • 6 Wheel Chairs (1 from each unit, 2 from ER • 6 Crash Trolleys (One from Each Unit) • 20 Futons/ Mats • Pulse Oxymeter – 6 from OT/ Rec Room/ Daycare, ER • **4 -5 Tourniquets** • **2 Ring /Bangle Cutters**
Extra CMOs Rubber stamps, Triage Cards, Case Sheets, Stationery,	
Medication Trolley, Dressing Trolleys, Injection Trolleys – **requisitioned** by CNO / Nursing-Shift-Supervisor - urgently from Pharmacy / Stores – as per ready lists used in Wards / ICUs – **assembled & readied** by Staff Nurses **Crash Carts from OPD / Imaging Dept. / 5th Floor / 2nd floor/ Dialysis- to be brought to Emergency / Main Reception**	

Crash Carts from IMCU, PICU, Cath Lab can be mobilized too

Code Orange register

7.8 Night Disaster Protocol (2000 to 0800 hrs)

Disaster protocols at night will follow the same format as above after Hospital Managers and Consultants arrive.

Until they arrive, the Emergency Doctor-on-Duty in charge will assume the responsibilities of the Command center. Emergency Dept operations will be carried out by Emergency Doctor-on-Duty / RMO's / SR's on duty, and the Disaster Team to be informed by the Call Centre Execs on night-duty. Nursing-Shift-Supervisor will assume the role of CNO and carry out the responsibilities.

7.9 Deceased

Patients who are Brought-in-Dead will be transferred to Mortuary (wait for processing – MLC Documentation / ID by NoK or Police / Hand-over-to-police (**Security/Commd. Centre to notify Civic Authorities not to send Dead-on-Spot cases**.)

8.0 Specific Responsibilities

8.1 Dir. Admin & Purchase / Administrator / DGM – Operations & Quality – anyone can be Command Center Director.

- Check with local authorities to **verify the disaster** and obtain additional information.
- **Authorize announcement of disaster** to hospital personnel.
- Get help from local police & volunteer organizations as required ; **coordinate with partner hospitals**.
- **Stay in the area of command center** to be available to make decisions / Resolve conflicts / **Verbal orders**
- Responsible for notifying all departments heads or alternates.

- **Co-ordinate & arrange for supply** of Medicines/IV Fluids /Blood & Blood products (**Verbal orders /Urgency**)
- Coordinate with CNO and doctors-on-duty for the early discharge of patients from wards, daycare and dialysis to accommodate priority-1 casualties.
- **Liase** with **the media** & **the Local Authorities** & **the police** & **Victims Families** / **Next-of-Kin**

8.2 Chief Nursing Officer (CNO):

- Collect pertinent data from **Command Center**.
  - Expected number of patient load.
  - Type of disaster & Location of disaster.
  - Types of injuries expected
  - Estimated time of arrival of patients (**ETA**).
- Evaluate number of extra staff necessary & mobilize Nurses (those who are off-duty /due-on-next-shift)
- Submit demand for Logistics to Stores/ Wards/ICUs as per patient requirements (continuous/ progressive)
- **Establish Disaster Ward** to treat Priority 2 & Priority-3 patients in **Main Reception** area
- Prepare unit assessment and submit to Control Center.
  - Room suites & nursing personnel available for immediate use / after next 2 hours .
  - Assign additional nursing staffs to designated suites to prepare for incoming patients.
  - Prepare room suites for critical & non-critical patients

8.3 Anaesthetist / O.T. Technician

- **DMS / DGM – Operations & Quality / CMOs -** inform /requisition OTs. & Coordinate / supervise transfer of patients to OTs.
- **O.T. Technician** will call other OT Technicians / OT Nurses till the arrival of OR supervisor/ in-charge.

- **O.T. Technician** will Check area for supplies & conduct immediate equipment check for Emergency Surgery
- **O.T. Technician** keeps list of additional Sterile supplies to be indented in Disaster situations
- Prepare OTs & Recovery Rooms / Trolleys / get Instrument Sets from CSSD
- Notify Command Center when Operating Rooms & Recovery Room is ready to receive more patients.
- Notify anesthetists who will maintain adequate anesthesia and drug supplies.
- Conduct Life & Limb saving surgery
- Inform Command Centre as & when more Surgeons & OT available & ready again

8.4 Staff Nurses

- Take charge of patients (ideally **1:1** , maximum **1:2**)
- Give aggressive First Aid treatment.
- Follow Doctors orders & Obtain information and fill out available information and time on disaster tags.
- Unknown patients have to be given Disaster ID Numbers – mark as **X-2**, **X-3**
- **DO NOT** leave your patient unattended.
- Make out the appropriate lab slips / X-ray requisitions with disaster number as per Doctors orders
- If patient admitted be sure to send all oxygen equipment with patient to his room.

8.5 Customer Care

- Quick Registration of all victims at Emergency Dept lobby and/or Main Reception area – Triage Cards will do too
- Issue Disaster ID No.s / Names / Age (if known)
- Assign Additional Doctors to console grieving relatives as soon as possible.
- Set-Up Patient Information Center - Refer all public information calls & press to desk in Main Reception / at the area below ramps
- Be responsible to see that families of victims / Next-of-Kin are notified as soon as possible.

- Assign one customer care executive to aid with Discharge of hospital patients, if needed.

8.6 Facilities Management & Security Team (Engg services + Maintenance team + Security)

- To be on standby at their room in case power-failure due to sudden increase in the load.
- Call in more staff
- Maintain full operation of all facilities.
- All doors should be locked immediately **except** employee entrance, Emergency Department door, and front lobby for security purposes. (Restrict entry at doors)
- Be responsible for setting up extra beds in hospital if needed, as well as transporting store-room supplies and bringing in extra supplies from other areas.
- Be willing to help with movement of victims from Ambulance to Triage / Triage to ER / ER to OTs
- Coordinate transfer of patients **to** nearby hospitals as required.
- Coordinate with partner Hospitals or ambulance services to arrange for more ambulances if required.

8.7 Materials Management – Stores

- Call in extra staff
- Supply all departments with supplies – quickly (**document on verbal orders from Dir. Med. Services / DGM – Operations & Quality / CNO/ Ass Mgr Admin / CMOs**)
- Mgr. Stores will designate assistant to supply runners/volunteers to deliver supplies/ acquire more supplies if required

8.8 PHARMACY

- Pharmacy In-Charge / Executive to Report to Command Center, then remains in department.
- Have list of drug suppliers that can provide emergency supplies quickly.

- Keep minimum supply of Emergency Drugs on hand at all times (**Buffer Stock -15 - 21 days reserve stock always there**)
- Assess the situation and determine the necessary steps to be taken.
- To ensure smooth distribution of pharmaceuticals – open more counters
- Maintain proper record of drugs issued / used during the disaster.
- More billing counters
- **OT Stores – should have a specific protocol for extra-provisioning during Disaster situations including Manpower & Consumables availability**

8.9 Laboratory

- Call in extra lab-technicians
- Collect & label specimens on site (Emergency dept / Main Reception / Disaster Ward)
- Have arrangements made to obtain additional blood, equipment and supplies from other agencies nearby.
- **ONLY Basic Minimum Lab Tests to be done, viz:**
  Hb / CBC / Blood Group & Rh / Serum Electrolytes / Blood Urea / Ser. Creatinine

8.10 RESPONSIBILITIES OF HEAD – LABORATORY SCIENCES

- Collect pertinent data from Control Center.
  - Type of disaster & Location of disaster.
  - Magnitude of patient load. & Types of injuries
- Evaluate number of extra staff required & call them to hospital
- Assign staff to designated job/ task to prepare for incoming patients**:**
  - Sample Collection from Emergency Triage Area / Main Reception Lobby
  - Whatever laboratory tests results obtained will be hand written.
  - All laboratory results will still be recorded in the various record books.

8.11 RESPONSIBILITIES OF LABORATORY STAFF

- Remain in laboratory.
- Wait for call from hospital / Do not call hospital
- Remain at home, if off-duty / Report for duty as usual, if not called in
- Receive assignment from the department head.
- Assist other staff members in sample collection .

8.12 RESPONSIBILITIES OF HEAD – RADIOLOGY & IMAGING

- The department head will collect information from the control center regarding **Type & Nature of Disaster**, Expected **Number of casualties** & **Expected Time-of-Arrival**
- He will then decide the duty of the radiology staff & call in extra staff (technicians / radiologists)
- To ensure that the radiology department is prepared to accept the patients (free the Portable X-Ray units & requisition extra films)
- To liaise with the Command Centre from time to time.
- Radiologists to report the films as soon as possible (deliver films to surgeons / Emergency Doctors) & flash reports immediately (for X-Rays, NCCTs, CECTs etc)
- To perform portable Ultra-Sound procedure if required
- **Portable X-Ray & Portable Ultra-Sound units - to be positioned in Emergency Dept**

8.13 RESPONSIBILITIES OF HOUSEKEEPING AND LINEN

- The housekeeping supervisor to **arrange extra staff** to standby at the areas where the victims are treated
- To ensure quick & efficient **cleaning** & handling blood spillage, immediately.
- To assist facilities in **transfer** of equipments / **transfer** of patients if required
- To arrange for **linen** supply to the departments due to increase in demand, if required.
- To send housekeepers to ward to **clear rooms** as soon as possible, if necessary.

8.14 SECURITY

The first response of security will be to **streamline Arrival of Patients** to Emergency / Main Reception / to cordon off the area using screens to prepare a Disaster Ward **Security** services will be operational at very early stages. Some other duties are:

- To secure the driveways for authorized parties, namely ambulances,
- To restrict and strictly control the entry to the hospital, ensure traffic control and cordoning off
- To direct the entry for authorized persons into appropriate areas, e.g. for relatives or media people,
- To protect personnel and patients.
- Directing excess traffic away from the hospital until traffic police assume this responsibility.
- The aim is to reduce congestion as far as possible to facilitate victims' access to the entrance of the hospital.

9 . Disclosure of patient information

While health service staff needs to cooperate with police, they must also bear in mind their duty of confidentiality to individual patients. Staff should not normally disclose personal information without the patient's consent. In the abnormal situation of a major incident, the duty of confidentiality is not automatically lifted.

10. Forensic evidence

Every major incident is a potential scene of crime. During their response to a major incident the medical and nursing staff at the scene, need to preserve evidence, since the police will wish to investigate what went wrong. If evidence is tampered with or destroyed it will jeopardize any subsequent investigation.

11. Debriefing will take place After:-

a. Disaster situation is under control & "**all clear**" has been announced by Dir Med Services / DGM - Operations & Quality

b. All victims of minor injury are discharged & after all victims of serious injury are admitted to hospital.

c. All patients will be treated as Medico-Legal Cases.

d. Relatives of victims have been located / MLC reports completed / dead bodies handed over to police

Debriefing will consist of:

- A complete log of all activities carried out by department heads & patients registered, treated and/ or shifted.
- Assessment of current supplies used / cost of disaster management / extra stocks to be procured
- Identify, report document any lapses, adverse events, logistical problems, command-control issues – all with the aim of reconciling finances + improving the response to a Disaster in future

COMMAND NUCLEUS

Name	Designation	Contact No.	Address
	DGM – Operation & Quality		
	Director Medical Services		
	Director Admin & Purchase		
	Administrator		
	Deputy DGM - Operations & Quality		
	Mgr. / Asst. Manager Admin		

	Mgr. Security		
	CMO		

INDIVIDUAL TASKING

Department	Contact Person	Task
Emergency	**CMO (On Duty)**	• **Inform Command Nucleus** • **Ask for announcement of appropriate code and thus inform all concerned – through ERCC** • **Convert emergency waiting area into pre-triage sorting area** • **Appoint one duty doctor in pre triage sorting area** • **Off duty ER Physician to be informed immediately and to report on duty.**
Nursing	**CNO**	• **Direct extra-nursing staff to reach emergency** • **Arrange for extra 1st-Aid material for patients in coordination with pharmacy** • **Appoint one sister or male nurse at the sorting area before triage** • **Coordinate patient shifting**
Nursing	**Emergency Charge Nurse**	• **Staff Nurse to help CMO to convert emergency reception into Triage area** • **Nominate staff nurse to help in putting tags on patient as per the reqmt.as DEAD, CRITICAL, IMMEDIATE in coordination with the doctor.**
Pharmacy	**On Duty**	• **Immediately send Disaster management kit made for 20 + 20 patients** • **Also arranges for more emergency medicines if**

Department	Contact Person	Task
		required
Blood Bank	**On Duty/ HOD**	• **To arrange for blood and blood components required for the patients**
Biomedical	**On Duty/ HOD**	• **Arrange for monitors/ ventilators if required by the patients**
Security	**Duty Supervisor/ Mgr**	• **Clear the emergency area** • **Take care of the belongings of the victims** • **Direct the relatives to the information desk**
Housekeeping	**Duty Supervisor / Asst Mgr.**	• **Allot extra staff for emergency** • **To keep the emergency area clean** • **Help nursing to shift patients**
Marketing	**HOD / Mgr / Execs**	• **Set up information desk** • **Inform external agencies as per command nucleus orders**
IPD Billing	**Mgr / Execs**	• **Check / Ensure max. accountability from Stores / Pharmacy / Nurses to generate near-accurate Bill for finance clearance**
Dietary		• **To check & suggest proper diet to F&B to serve patients as per their reqmt.**
Stores		
F & B		• **Arrange food for patients as per Dietary Department Orders** • **Provision of Safe Drinking water (Mobilise 3-4 R.O. Water Dispensers to ER Triage Area / Main Hospital Lobby)**
Lab		• Call in extra lab-technicians • Collect & label specimens on site (Emergency dept /

Department	Contact Person	Task
		Main Reception / Disaster Ward) • Have arrangements made to obtain additional blood, equipment and supplies from other agencies nearby. • ONLY Basic Minimum Lab Tests to be done, viz: • Hb / CBC / Blood Group & Rh / Serum Electrolytes / Blood Urea / Ser. Creatinine /
	Lab- Head	• Collect pertinent data from Control Center. ➢ Type of disaster & Location of disaster. ➢ Magnitude of patient load. & Types of injuries ➢ -Evaluate number of extra staff required & call them to hospital • Assign staff to designated job/ task to prepare for incoming patients: ➢ _ Sample Collection from Emergency Triage Area / Main Reception Lobby ➢ _ Whatever laboratory tests results obtained will be hand written. ➢ _ All laboratory results will still be recorded in the various record books.
	Lab- Staff	• Remain in laboratory. ➢ Wait for call from hospital / Do not call hospital ➢ Remain at home, if off-duty / Report for duty as usual, if not called in ➢ Receive assignment from the department head. ➢ Assist other staff members in sample collection.
Radiology	Head	• The department head will collect information from

Department	Contact Person	Task
		the control center regarding Type & Nature of Disaster, Expected • Number of casualties & Expected Time-of-Arrival • He will then decide the duty of the radiology staff & call in extra staff (technicians / radiologists) • To ensure that the radiology department is prepared to accept the patients (free the Portable X-Ray units & requisition extra • films) • To liaise with the Command Centre from time to time. • Radiologists to report the films as soon as possible (deliver films to surgeons / Emergency Doctors) & flash reports • immediately (for X-Rays, NCCTs, CECTs etc) • To perform portable Ultra-Sound procedure if required • Portable X-Ray & Portable Ultra-Sound units - to be positioned in Emergency Dept
Front Office		Manages Information Centre.

CONCLUSIONS

The key for any successful mastering of a crisis is to be well prepared. All potential problems have to be carefully analyzed and respective precautions have to be taken. Some investments may be expensive but are most likely well worth it.

Emotional denial of mass accidents and disasters results in an act of negligence. Only an illusionist beliefs that he will be able to manage major accidents and disasters without systematic planning by simply concentrating on existing resources. No one should rely too much or exclusively on high-tech facilities in extraordinary situations. Major accidents and disasters can only be mastered and controlled by intelligent planning.

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