PREPAREDNESS
ON
DISASTER
MANAGEMENT

CAPITAL HOSPITAL, BHUBANESWAR
Introduction about Capital Hospital, Bhubaneswar

A FLAG-SHIP hospital of Govt. of Odisha. Started in 1954 with only 60 beds, on 20 Acres of land, now boasts it's head high with 563 + 100 beds at the centre of temple city, Bhubaneswar. It is the main centre of hope and aspiration of 10-12 lakhs of people of Bhubaneswar, along with adjacent districts like Khurda, Nayagarh, Puri & adjoining areas. The biggest peripheral hospital in the State with round the clock specialist services at each minute of contact.
HOSPITAL PROFILE:

Functioning Depts.:

1. Medicine
2. Surgery
3. Paediatrics
4. Obstetrics & Gynaecology
5. Cardiology
6. Orthopaedic
7. Neuro Surgery
8. Ophthalmology
9. ENT
10. Skin & VD
11. Pulmonary Medicine
12. Psychiatry
13. Dental
14. Radiology
15. Anaesthesiology
16. Pathology
17. Microbiology
18. Casualty

Services available:

1. ICU
2. SNCU
3. OT
4. Cathlab
5. Dialysis
6. Pharmacy
7. ARV clinic
8. X-ray
9. Ultrasound
10. CT scan
11. ECG
12. Audiometry
13. Ambulance
14. Dietary Service
15. Round the clock specialist service
Disaster Response Committee at Capital Hospital, Bhubaneswar

- Medical Superintendent
- Dy. Medical Superintendent
- Spl. in Hospital Administration
- MO I/c, casualty
- Surgery Specialist
- Orthopaedic Specialist
- Anaesthetist
- Medicine Specialist
- Paediatrician
- Blood Bank Officer
- Radiologist
- Store Medical Officer, Radiographer, Accountant
- Hospital Manager

Role of Disaster Response Team:
- Coordinate with Directorate, State RRT and District Authority for needful action & instructions from time to time as per situation.
- To activate the chain of commands for disaster response plan in accordance to the protocol & guidelines available in response to early warning sign
- Rapidly assess the magnitude the problem, population at risk, source of infection.
- Rapidly prepare a health aid plan and procure required
- Management of the overall response activities and providing hand holding support in the field
- To develop the media messages on field updates & share it with state Control room/district control room spokesperson
- To mobilize resources for response measures (Manpower/Mobility support/drugs/logistics/funds/others)
- To collect and store disaster related information for post incident analysis

Mass Casualty Incident Management Plan

During Disaster:
- As soon as any information is received regarding disaster, the Superintendent immediately convenes a meeting of Disaster Committee member to discuss the different modalities of operation for the mass casualty incident.
- Superintendent himself becomes the incident commander and coordinates all the activity from the control room located at Casualty. Dy. Superintendent is second in command or the operation as chief in Charge supported by a team who are assigned different roles and planning chief etc. during any disaster with mass casualty.
- Immediately one ambulance with a team of MOs, Pharmacist, Attendant/Staff Nurse is dispatched to the site of Occurrence. Information is also sent to the nearby health facilities.
- A control room is opened in the office of Dy. Superintendent for all the necessary communication, case management, referral & coordination with other related deptts. (Blood bank, Radiology, Pathology)
- Control room has telephone for transmission of information to the higher level and other related deptt. The list of contact numbers of medical Officers & Paramedics of the hospital along with police, Fire services, water, Electricity, Blood Bank, NGOs, Private Physicians are available with Dy. Superintendent.
• Immediately inter Sectoral coordination is established with other related deptt. Like Police, fire services Red Cross, Corporate & private hospital, ambulance services, NGOs, Voluntary Organization, Water, Electricity, Sanitation Deptt., Civil Defense, ESI, Railways, transport etc to seek their assistance.
• Dy. Superintendent alerts Spl. HA/ Specialists in Surgery / Orthopedics/ anesthesia/other ancillary staffs for the emergency.
• Verification of drugs/logistics other supplies, deployment of MOs & paramedics, status of basic life support equipment, Operation Theater are being kept in readiness.
• When the disaster patient arrives doctors on duty at casualty receives and attends to them. After examination the case is re triaged and send to the ward or given treatment for minor injuries and discharged or else referred to the next higher health facility if required.
• The OPD/ IPD Deptt, is being alerted regarding the incident and more MOs are pulled from other wards to manage the ongoing situation.
• Separate wards/beds are arranged on priority basis to address the surge of casualty.
• If the Mass casualties extend beyond 24 hours, MOs are deployed from other areas within and outside the district.
• Reception area with registration facility and help desks are opened nearer to the casualty.
• Patient Resuscitation area is located in the casualty where priority 1 patients are treated and stabilized immediately.
• Patient Observation area is located in the casualty where priority patients are kept for some time before getting definitive management.
• Minor Treatment area: This area is the dressing room located near the casualty where the priority 3 (walking wounded) can be managed and discharged.
• **Operation Theatre:** When disaster is declared, all the elective cases are deferred and OT is prepared for emergency victims.
• **Organization of Wards:** To vacate some Emergency ward, Surgery Ward & Orthopedic ward will be required vacate some beds of elective patients by temporarily discharging them. In case some other beds are vacant, these patients can be taken up those beds.
• **Organization of the Mortuary:** The Superintendent & I/c Police Out Post will arrange for the preservation of the dead bodies.
• **Organization of Patient Transfer after stabilization:** Patient who cannot be further be treated are transferred to higher tertiary care hospital/accredited hospital by 108 ambulances for further treatment.
• State Health Control Room functioning in the Directorate of Public Health, Odisha. Bio terrorism emergency Toll Free number is 1800-345-6776
• Bio terrorism toll free number at central surveillance Unit, New Delhi is 1800-11-9377 or 1075
• Control Room functioning in DY. Superintendent office/ Casualty for Epidemics/flood/Cyclones
• While control room functions in the office of Dy. Superintendent during mass casualty.
• Emergency care services for mass casualty are being provided: 24X7
• SOPs and guidelines are being followed.
• Drugs & logistic management for additional mass casualties for which buffer stocks of medicine is made available at hospital.
• Additional makeshift beds are arranged at all levels of hospital to accommodate the surge of casualty.
## Operational Planning:

<table>
<thead>
<tr>
<th>Area</th>
<th>Person responsible/ logistics</th>
<th>Work assigned</th>
</tr>
</thead>
</table>
| 1. Registration area/ Triage Area | - Casualty Pharmacist on desk  
- Triage Doctors/Nurses  
- Adequate # MOs in Emergency room  
- Adequate trolleys/stretchers/wheel chairs  
- Hospital attendants | - Registration of case  
- Screening by Triage Criteria (1,2,3) |
| 2. Emergency Deptt. | - Casualty MO/Doctor in Charge  
- Oxygen, IV Fluids, lifesaving drugs | Emergency case management |
| 3. Definitive Care (OTs, WARDS) | Surg Spl / Ortho Spl / Neuro Surg / other dinicians | Case management |
| 4. Intensive Treatment area (ICUs) | Head of Anesthesiology/Critical Care/Medicine | Case management |
| 5. Minor Treatment Areas | Nurses, attendants familiar with first aid, splinting & dressing | First Aid |
| 6. Holding areas for relatives/ Non injured | Social service providers / NGOs | |
| 7. Decontamination Area | If needed as per protocol | |
| 8. Essential ancillary services (Lab, Radiology, Pharmacy, radiology services, blood bank) | -deployment or reallocation of radiographer Lab Tech, Pharmacist/ Nursing staff from Other non-affected areas | |
| 9. Mortuary Service | Mortuary in Charge, & a forensic Personnel | -Dead body preservation (DOA), Disaster tagging -Record maintenance |
| 10. Hospital Dietary System | Kitchen staff | Diet provision to ambulatory in house patients |
| 11. Sanitation Services | Ward attendants/ Sweepers | Clean hospital linen, sterile dressing |
| 12. Hospital Laundry & Sterile Supply | Laundry in charge | Clean hospital linen, sterile dressing |
| 13. Water/ electricity | Public Health Engineering Deptts., Electricity Department | Maintenance of water & Electricity Supply |
| 14. Staff education & trg. | MOS, ADMO PH, State Health officials | |
| 15. Disaster drills | | |

### 8.6 Emergency Response in first 24 hours:

<table>
<thead>
<tr>
<th>Immediate (0-2hrs)</th>
<th>Intermediate Response (2-6 hrs) Rapid Assessment</th>
<th>Intermediate Response (6-12hrs)</th>
<th>Extended Response (12-24 hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing of information with other concerned departments (RD, H&amp;UD, PRI, School &amp; ME, W&amp;CD, Revenue, Food &amp; supplies, RWSS, OSDMA, Civil Defenses, Red Cross, UNDP, Surface transport, National Org).</td>
<td>Coordination risk communication messages, Networking with other hospitals/agencies, Health related volunteers</td>
<td>Assess and acquire health resources as per need</td>
<td></td>
</tr>
</tbody>
</table>
Emergency Department Workflow

Patient

Registration by attendants

Treatment starts at triage involving immediate resuscitation

Concerned specialty involved

Required procedures performed

A

Stable

Shifted to emergency ward for observations

Observation recommended

Shifted to normal ward

B

Serious

Pt stable/serious

Given further treatment and other procedures performed

C

Expires

Information sent to all concerns

Documentation as required

Body handed over to relatives
Use of Hospital during Mass Casualty Incident:

USE OF DIFFERENT AREAS OF A HOSPITAL DURING MCI

- Patient Reception Area
  1. Triage
  2. Registration
- Priority: 1
- Priority: 2
- Priority: 3
- Brought Dead

Emergency Department
  1. Resuscitation & Stabilization
  - Facility Available: Operation Theatre
  - Facility not Available: Ward
  - Discharge/Dead

Priority: 2
  - Stabilization & Observation
  - Facility Available

Priority: 3

O.P.D.
  Mortuary: Temporary Area for Dead Bodies

Expected flow of patients during a Mass Casualty Event in a District Hospital
Figure below shows the model incident command structure for Capital Hospital, Bhubaneswar

Incident Commander Director, Can take added role of PRO

- Operation Chief in-charge of all medical care (Senior Surgeons)

  - Medical Care In-charge (MOIC)
    - Emergency
    - Casualty
    - Medical Officer
  - Support Branches In-charge
    - Lab
    - Radiology
    - Pharmacy
    - NS
  - Orthopedic
  - Mobile Units

  - ED
  - Surgery
  - ICU

- Nursing In-charge (Matron)
  - Communication
  - Transport
  - Dietary
  - Sanitation & Water

  - Ensure adequate staff in emergency, OT and Wards

- Logistics Chief (Senior Doctor)
  - Manpower planning in different areas
  - Doctors
  - Nurses
  - Group C&D

- Planning Chief (Senior Doctor)
  - Liaising with other agencies to help
  - District CMO
  - Nearby Hospitals/ Pvt. Doctors

- Liaison Chief Director to take this role
  - To ensure adequate medical supplies reach the patients care areas when demanded by operation chief
  - District Authority
  - Blood Banks
  - Police

- Stores In-charge
### EMERGENCY DRUGS AVAILABLE:

<table>
<thead>
<tr>
<th>Name of the Drugs available</th>
<th>Place of Availability</th>
<th>Stock Quantities at Central Store</th>
<th>Responsible person with address</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV Fluids</td>
<td>Central Store, Capital Hospital, Bhubaneswar, Causality, All wards and Zonal Hospitals</td>
<td>102498</td>
<td>Dr. S K Panda Store Medical Officer Cell No. 8895082407</td>
</tr>
<tr>
<td>ORS Powder</td>
<td>Central Store</td>
<td>24000</td>
<td></td>
</tr>
<tr>
<td><strong>Antibiotic</strong></td>
<td></td>
<td>22000</td>
<td></td>
</tr>
<tr>
<td>Injetable</td>
<td></td>
<td>54000</td>
<td></td>
</tr>
<tr>
<td>Cap/ Tab</td>
<td></td>
<td>10000</td>
<td></td>
</tr>
<tr>
<td><strong>Anti-Diarrohoeal</strong></td>
<td></td>
<td>9800</td>
<td></td>
</tr>
<tr>
<td>Injetable</td>
<td></td>
<td>64000</td>
<td></td>
</tr>
<tr>
<td>Cap/ Tab/ Syp.</td>
<td></td>
<td>5000</td>
<td></td>
</tr>
<tr>
<td><strong>Analgesic</strong></td>
<td></td>
<td>9800</td>
<td></td>
</tr>
<tr>
<td>Injetable</td>
<td></td>
<td>64000</td>
<td></td>
</tr>
<tr>
<td>Cap/ Tab/ Syp.</td>
<td></td>
<td>5000</td>
<td></td>
</tr>
<tr>
<td><strong>Disinfectant and surgical dressing</strong></td>
<td></td>
<td>6400</td>
<td></td>
</tr>
<tr>
<td>Gauze/ Bandage/ Cotton</td>
<td></td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Oint/ Lotion</td>
<td></td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Black Disinfected Phenyln</td>
<td></td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Inj. Primacort</td>
<td></td>
<td>4000</td>
<td></td>
</tr>
<tr>
<td>Inj. Deriphylin</td>
<td></td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Inj. Dexamethasone</td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Inj. Adrenaline</td>
<td></td>
<td>20 Pkt (500 Kg)</td>
<td></td>
</tr>
<tr>
<td>Halogen</td>
<td></td>
<td>5000</td>
<td></td>
</tr>
<tr>
<td>Inj. Tetanus Oxide</td>
<td></td>
<td>1130</td>
<td></td>
</tr>
<tr>
<td>Inj. ASV</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### INFRASTRUCTURE AVAILABILITY:

<table>
<thead>
<tr>
<th>Name of PHC/PHC(N)</th>
<th>No. of Beds</th>
<th>No. of Oxygen Cylinder</th>
<th>Vehicles</th>
<th>Surgical Equipment’s</th>
<th>Contact Person and Tel. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director, Capital Hospital</td>
<td>563</td>
<td>100 small cylinders + Central oxygen supply to ICU and disaster room.</td>
<td>2 nos of Ambulance</td>
<td>2 nos of OT along with all surgical equipment’s</td>
<td>Casualty Medical Officer, 0674-2390179</td>
</tr>
<tr>
<td>Day</td>
<td>Persons responsible on control room duty and time</td>
<td>Contact Address with Tel. No</td>
<td>Mobile Health Teams</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>All days p</td>
<td>Causality M.O-I</td>
<td>Casuality Medical Officer, 0674-2390179</td>
<td>Nil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>