MALWANCHAL UNIVERSITY, INDORE

Disaster Management Plan

Year -2025-2026

MALWANCHAL UNIVERSITY,INDORE

DISASTER MANAGEMENT PLAN

1. INTRODUCTION

Disasters have an uncanny ability to bring to the forefront vulnerabilities of systems, structures, processes and people which in turn cause large scale damages; and hospitals are no exception to this rule.

In India, experiences from the Gujarat earthquake of 2001, the Indian Ocean Tsunami of 2004 and the Kashmir Earthquake of 2005 have shown that disasters affect not only the population but also health facilities. Particularly when the Children's Hospital in Jammu collapsed; in the city of Bhuj, where thousands of people died and the civil hospital was reduced to a heap of debris when it was needed the most. The fire in AMRI Hospital in Kolkata, where more than 90 people died, reminded us that it is not simply the structural resilience but also operational resilience of hospitals that needs to be addressed, if we wish to reduce the impact of disasters onhospitals.

Both these instances of the civil hospital collapsing in Bhuj and the fire in AMRI Hospital in Kolkata, provided evidence based lessons of the underlying vulnerabilities that cause hospitals to get affected by disasters, which may be broadly grouped as follows:Inadequate or non-compliance of structural elements of hospitals to building codes and other safety norms which result in the failure of hospital structures and their component non-structuralelements, Absence of an operational Hospital Disaster ManagementPlan;, Lack of planning and preparedness to respond todisasters;Inadequate or complete lack of internal and external communication;and Lack of networking amongsthospitals.As a result, when hospitals are affected by disasters, the repercussionsare three dimensional – health, social andeconomic.

Objective of the Hospital Disaster Management Plan

The main objective of the Hospital Disaster Management Plan is to optimally prepare the staff, institutional resources and structures of the hospital for effective performance in different disaster situations.

a. **InternalDisaster:**

The impact of internal disasters such as fire, exposure to hazardous materials, epidemics of infections is typically limited to the hospital facility.

External Disaster:

External disasters include scenarios such as earthquakes, mass casualty events or epidemics where the hospital itself may or may not be affected but is a critical part of the larger response. As such three scenarios can be expected when disasters strike.
The possible disasters are as follows:

I. Earthquake

Bhopal and surrounding regions lie in a Stable Continental Region (SCR) that is not seismically active. However, minor to moderate earthquakes have occurred now and then at different localities, which are not damaging in nature. As per Seismic Zoning Map of India (IS: 1893, 2002, 2014), Bhopal city is located in SeismicZone-III.

II. Flood

The city of Bhopal has experienced many episodes of flood as many ponds are situated in the city. Heavy rains create the situation floods often. One more reason was flash floods due to nallah-overflows and poor drainage.

III. Road accident

Road accidents are common; the main cause of accidents on road apparently can be carelessness of drivers especially during overtaking. The drivers will be trained for responsible driving at least to reduce the risk of accident of ambulance. Hence the risk ismoderate.

2. FIRE SAFETY IN HOSPITAL /COLLAGE
Expected Levels of Fire Safety In Hospitals /Collage

Hospitals has provision for two levels of safety within their premises:

1. **Comparative Safety:** which is protection against heat and smoke within the hospital premises, where removal of the occupants outside the premises is not feasibleand/or possible. Comparative Safety may be achieved through:

(6) The emergency lighting shall be activated within one second of the failure of the normal lighting.

(7) The luminaries shall be mounted as low as possible but at least 2 mt above the floorlevel.

(8) Emergency lighting shall be designed to ensure that a fault or failure in any open luminaries does not further reduce the effectiveness of thesystem.

(9) Emergency lighting luminaries and their fittings shall be of non-flammable type.

(10) The emergency lighting system shall be capable of continuous operation for a minimum of 1 hour and a half hours (90minutes).

4. INCIDENT COMMANDCENTRE

. Purpose

During a disaster, the Incident Command Center (ICC) prompts mobilization and coordination of personnel, equipment and supplies. A disaster is defined as a situation where the normal operations of the facility are, or have potential, to rapidly become overtaxed to theextent that additional measures and resources must be committed in order to provide the necessary medical care.

. Hospital Policy

Based on the principles of the Hospital Emergency Incident Command System (HEICS), in the event a disaster occurs the Hospital will implement the Incident Command Centre.Hospital is preparedto:

a. Receive and classify patients(TRIAGE)

b. Provide emergency casualty care

c. Provide continuing care for the hospital's pre-disaster critically illpatients

d. Evaluate non-critical pre-disaster patients for possible transfer home or another designated location

e. Maintain adequate records on casualty patients

f. Provide information and facilities for federal agencies, members of the press, city, state, the clergy, patient families, employees, and the general public

· Record incident-relatedproblems

· Record any other documentation necessary as directed by the Incident Commander.

2. Logistics Section Chief

· Organize and direct operations to maintain the physical environment

· Maintain adequate levels of food, shelter and supplies supporting the medical objective.

3. Nursing Section Chief /Matron

Organize and coordinate nursing activities.

· Direct patient care services.

4. Medical Director

· Contact and coordinate physicians.

· Credential volunteer medical staff asnecessary.

· Assist in assigning available medical staff.

5. Security Section Chief

Coordinate all security operations in support of the disaster situation.

· Serve as liaison to NYPD and NYC Fire Department.

· Secure all hospitalentrances/exits.

· Control traffic flow in and adjacent to the EmergencyDepartment/Disaster location.

6. Hospital support and Operations SectionChief

· Protect, evaluate, control, repair and maintain plant and utilitysystems necessary for patient care in support of the disastercondition.

· Implement back-up measures in the event of utility failures.

· Assign Unit Leaders for power, water, HVAC, electric and medical gases.7.

7. Finance Administrator

· Monitor the utilization of financial assets in support of theem ergency operation.

disaster management, the RMO will be responsible for addressing themedia.

Security office

- Liaison with various agencies such as the fire brigade, police done by chief securityofficer.
- Take necessary actions to control crowd, traffic control with in thehospital.
- Direct the ambulance in and out of thehospital.
- Physical arrangement of triage area should be done by securityguards.

Reception and visitors' area

Reception staff

- Maintain register for victims of disaster
- Provide necessary instructions to patient and patientrelatives.
- Notify Emergency Communications Center if internal disaster isinvolved.
- Do not accept routine non-emergencyadmission.

Patient receiving area Triage officer

- Triage officer will take in charge of forming triage team in the patient receivingarea.
- Categorize patients according to the severity of condition and assign staffs for treatment.
- RMO/Hospital superintendent will be the triageofficer.
- Establish information services for relatives andfriends.

Specialist doctors

- Specialist doctors in the triage team include, general surgeon, orthopedic surgeon, physician, anesthetistetc.
- Identify the patients who need special care in their concerned areas and provide necessarymanagement

Nursing staffs

- All the nursing staffs in the triage team should be trained in Emergency MedicalServices.
- Nursing in charge should have the list of equipment and medicines available in the unit.
- Obtain information and fill out available information and time on disastertags. Even if no information is available as to identity, give information as to Condition, types of injuries,etc.
- Give aggressive first aid treatment.

Ambulance

- 24x7 service, ambulance including mobile ICUs should be makeavailable.
- Enough number of drivers, emergency technicians should beavailable.

Mortuary

- One security personnel on duty, ensure proper electricity in theunit.
- Maintain proper register, help the family members to identify the dead body and hand over to them.

Lab

- Department Head or designee will call in their own personnel as needed after reporting to Command Center
- Verify the samples with request and do theanalysis
- Disseminate lab reports ontime

Blood bank

- At least two staffs onduty
- One staff should be responsible for receiving the matching samples, and other should do the cross matching and dispatching theblood.
- Keep a list of blood groups and products available in theunit.
- Arrange for further blood products whenneeded.
- Maintain properregisters.

Pharmacy

- 24x7 duty in the central pharmacy, at least three staffs onduty.
- Report to Command Center, then remain indepartment.
- Have list of drug suppliers that can provide emergency suppliesquickly.
- Provide necessary drugs and equipment wheneverrequested.
- Ensure enough stock ofmedicines
- Arrange for further stock of medicines in case shortage has beenreported.

ICUs

Nursing in charge should;

- Evaluate patients in the Intensive Care Unit for possible discharges. Use established discharge criteria as a guide(GHE/ICU/01). Transfer patients out if indicated.
- Prepare to admit more critically illpatients.
- Send runner to Command Center or phone forhelp.

for the disaster victims. As the preparations need be adequate for the patient load, it is essential to reconfirm the information passed to the Command centre on the scale of damage, and patient movements from the disaster site. It is highly likely that multiple sources may pass on the same information, or information varied on the scale of damage. It is therefore advisable to document the source of information with name, position, and contact number of the source of each piece of information obtained at the hospital, and the disaster helplines. The information that will be passed onto the Command centreshould be reverified. The Command Centre will also be disseminating information on the victims and victim load to the media through media briefs. It is advisable to open an Information centre for the purpose, to ensure unhindered working of the different units of the hospital. Information on the admitted/transported victims will also be passed to the inquiring relatives, and public representatives through thiscentre.

It is imperative to adhere to infection control guidelines in the different units of the hospital during all phases of the disaster management. This will also be included in the staff training for disaster management. The hospital should have a policy on the restriction of entry of visitors (KASH/ NABH/ NDMA Hospital Safety Guidelines), and other persons including media, police, and public representatives and it should be conveyed to all concerned parties on this policy. It is advisable to have a separate discreet entry-exit for visiting VIPs, like Ministers, Governmental authorities etc. to avoid media and public crowding.

Furthermore, proper documentation of the disaster victims in the hospital is necessary for identification purposes, needs assessment and impact assessment. Daily line listing of the patients (disaster victims) isadvisable.

Health personnel at disaster sites:

In situations where health personnel are requested to accompany the rescue teams at disaster sites, the personnel who are charged with this duty should be trained to navigate disaster sites, and should be provided with the required protection equipment (PPE). Health personnel untrained in such, should not be required to accompany rescue teams to dangerous disaster sites at the risk of their own lives. On such missions, the members of the trained rescue teams should ensure the safety of the accompanying health personnel, and there should be clarification on the transportation of rescue team members falling victim to the disaster or secondary events.

INTERNAL DISASTER: Source inside the

- When situation is under control announce CodeGREEN.

5. AWARENESS GENERATION FOR HOSPITALSAFETY

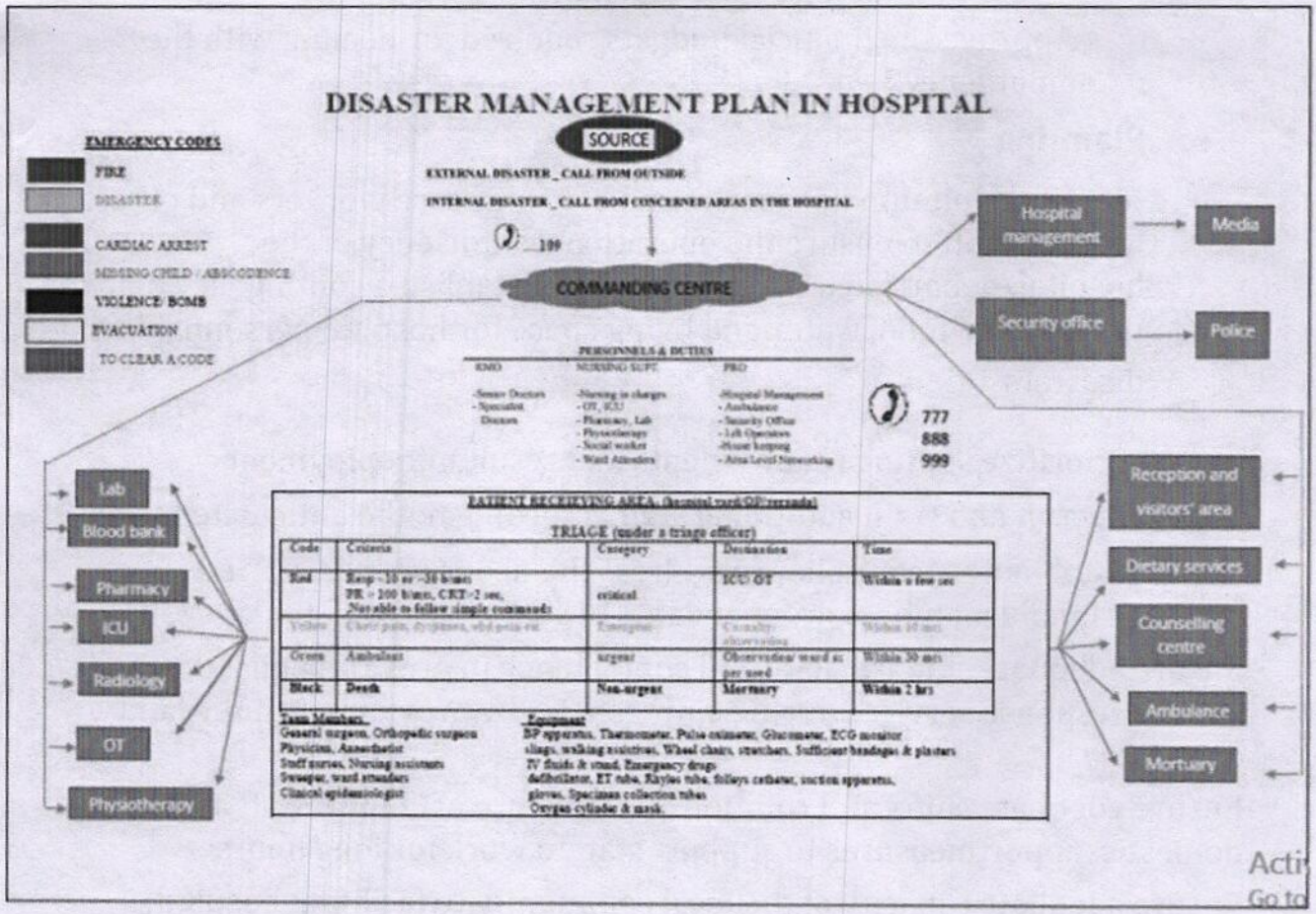
. Key Elements of Awareness Generation for HospitalSafety

An awareness program on Hospital Safety aims at providing the basic information and creating the enabling environment so that the level of acceptance for hospital safety is increased among the target group and an interest to know more is generated. The awareness strategy for hospital safety should follow a top down approach, as the major decisions such as ensuring structural safety through retrofitting of hospitals, non-structural safety, taking steps to sensitize employees in various aspects of hospital safety are taken by the top management of hospitals. The strategy is developed using multiple modes of communication and adopting a multi-hazard approach. Involvement of all modes of communication such as electronic, print, audio-visuals on disasters, dos and don'ts, standard operating procedures (SOPs) should be required to reach all segments of the targetaudience.

While developing messages for an awareness campaign on Hospital Safety, the following elements are covered:

- **Assessment of risk factors that put hospitals and health facilities at risk.** These include Buildings, their location and design specifications, patients – who are highly vulnerable and during emergencies, the number of patients as well as their vulnerability increases. Other than these, damage to hospital equipment and lack of basic lifeline services adds to therisk.

- **Components of a hospital or health facility are typically divided into two categories.** These are structural (design of buildings, resilience of material used etc.) and non-structural (mechanical equipment, storage, shelves etc.) that determine the overall safety of the healthfacilities.
- **Functional collapse, not structural damage, is the usual reason for hospitals being put out of service during emergencies.** Elements that allow a hospital to operate on a day-to-day basis are unable to perform during emergencies. These include labs, operating theatres, medical records, medical services, administrative processesetc.
- **Making hospitals safe from disasters is not costly.** Incorporating mitigation measures into the design and construction of new hospitals accounts for less than 4 percent of the totalinvestment.
- **Makeshift/Temporary/Field hospitals are not necessarily the best solution to compensate for the loss of a hospital or health facility,** as these are not cost effective
- **Seeking the right technical expertise** to ensure that norms and building standards are in place.



To enable effective preparedness for and response during disasters, an efficiently functioning

Incident Commander
Logistics, Supply & Finance
Communication Safety & Security
Planning Operations

HIRS (designed on the lines of a typical Incident Response System) shall be established in hospital. The overall objective of the Hospital Incident Response System (HIRS) structure shall be to enable the development of strategies, management of resources, and planning and implementation of operations in emergencysituations.

1. Incident Commander

- Take charge of the disastrous scenario as soon as the first information arrives.·

Assess the situation and decide whether any external help would be required or not.

· Take a decision on which hospitals to be called for mutualaid.

- The list of casualties along with their status shall be displayed at a prominent place outside the casualty / emergency ward, in both English and the local language, which shall be periodicallyupdated.
- They shall be responsible for the press releases after consultation with theIncident Commander.
- They shall at all moments keep the Incident Commander updated of all happenings at site.
- They shall ensure that all communications modes/lines are kept available to themaximum extent aspossible.
- Ensure availability of reliable and suitable primary and back-up communication system.
- Establish an Information desk to provide the requisite information at regular intervals and to serve as a hub for volunteer mobilization and management.

2. Safety &Security

- The hospital security team shall be responsible for all hospital safety and security activities · Prioritize security needs of the hospital and identify areas where increased vulnerability is anticipated
- Ensure early control of facility access points, triage, and other areas of patient flow · Establish reliable modes of identifying authorized hospital personnel, patients, patient's attendantsand visitors
- Establish mechanisms to escort medical personnel related to disaster relief to thepatientcare areas whenneeded
- Deploy security measures required for safe and efficient hospital evacuation · If any external rescue, fire-fighting etc. services are engaged then the security team shall ensure efficient guidance to the external services regarding the access and routes.Solicit inputs from the hospital incident committee regarding challenges and constraints in prevention and controlof hospital infection
- Aid the local police in implementing lawenforcement
- Establish an area for radioactive, biological and chemical decontamination and isolation

3. Logistics Supply &Finance

- The store and finance team shall ensure logistics, supply and finance during disaster · Develop and maintain an updated inventory of all equipment, supplies and pharmaceuticals and establishment of a shortage-alertmechanism
- Estimate consumption of essential supplies and pharmaceuticals in a disaster scenario and arrange for additional supplies fromstore
- Consult with authorities to ensure the continuous provision of essential medicinesand supplies
- Assess the quality of the contingency items prior topurchase

c) Regular Training and capacity building provision shall be made to enhance the staff capacity and competency in providing high demand clinical services during emergencies.

8.Drills

a) Every hospital/healthcare facility shall conduct periodic drills and rehearsals to test the b) to test response capabilities to emergencies in real time and serve as opportunities for practical

c) Learning for the hospitalstaff.

d) There are several types of hospital drills which include computer simulations,tabletop

e) Exercises and operationalized drills involving specific victimscenarios.

(1) Table TopExercises

A TableTopExercise is a paper drill intended to demonstrate the working and communication relationships of functions found within the disaster management organizational plan and HIRS. The exercise is intended primarily for the administrators, managers and personnel who could conceivably be placed into an officer's position upon activation of the disaster managementplan.

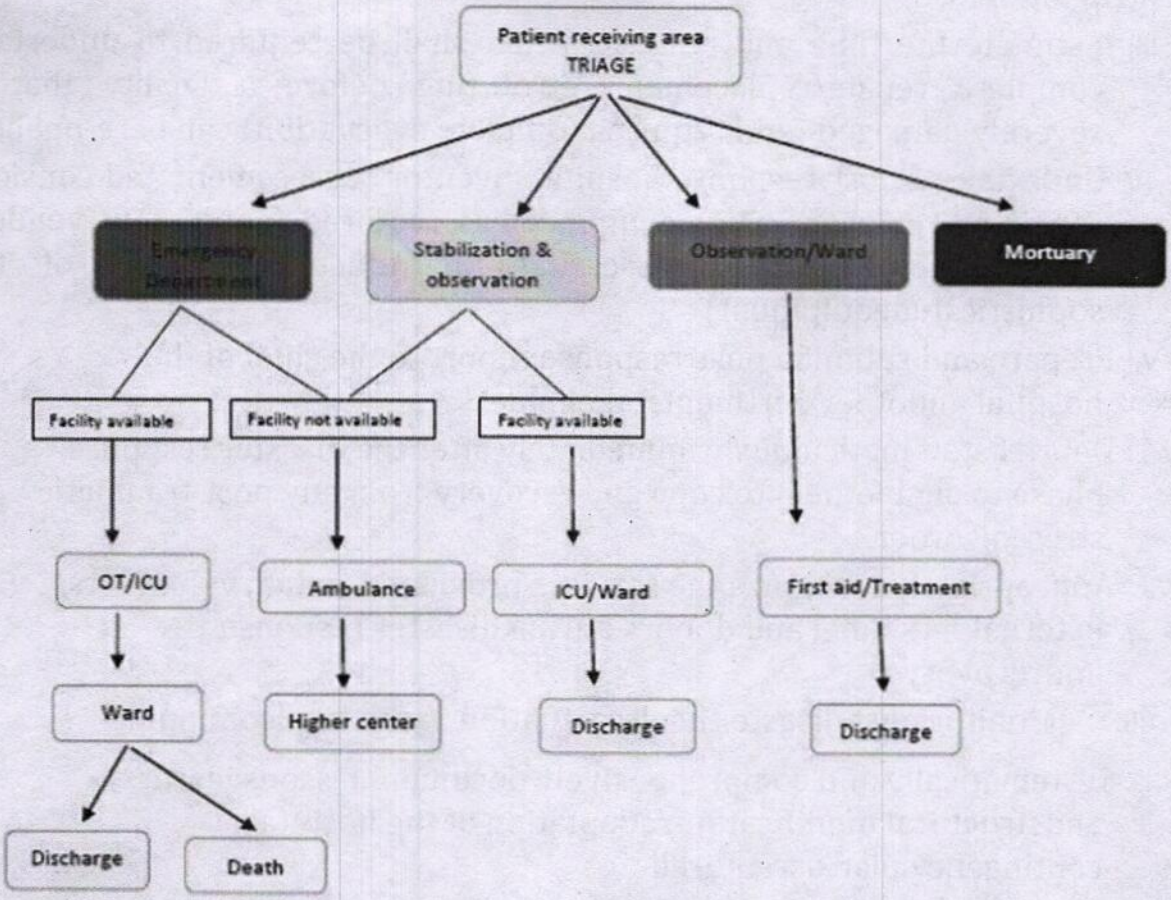
(2) Partial evacuation/Non-evacuation Drills & Mass Casualty Incident (MCI)Response Drills

Hospital evacuation may become a necessity if the hospital itself is damaged in a disaster. Such situations need to be foreseen and proper planning has to go into how to evacuate and which areas of the hospitals need to be evacuated first in case of an internal disaster. Hospital shall do an ICU evacuation drill & award evacuation drill once a year. The function of MCI drill is to check the resilience of the system in terms of capacity & capability when faced with an extraordinary surge of patients in the Emergency Room after an external disaster. It is recommended to Hospital shall carry out a MCI drill once a year.

9.Documentation

1. AllMedico-LegalCasesshallberecordedproperly.However,thetreatmentofpatients will get priority overpaperwork.
2. To meet the surge of cases, additional medical records assistant/ technician shall be posted from the Medical recordssection.
3. Computerized documentation (or manual) will be beneficial for the staff, police, next of kin and the press. Details of the casualties received and being admitted, their clinical condition, along with color coordinated classification status by Triage shall be

Expected flow of patient during mass casualty event in a hospital



11. Post-DisasterRecovery

Post-disaster recovery planning shall be part of the Hospital Disaster Management Planning process and it shall be performed at the onset of response activities.

To ensure speedy and effective post-disaster recovery every hospital/healthcare facility shall:

I. Designate an official/member of the staff to oversee the hospital recovery operations

II. II. Determine the essential criteria and processes to deactivate the disaster response an recovery activities from the hospital's normal operation

(1) **Hazards and Risks**: in and around the hospital through prominently displayed posters, wall hangings and hoardings. The posters, wall hangings and hoardings shall be permanent and displayed at all times in the hospital premises and shall be updated as necessary,and

(2) **Emergency Exit Routes and Evacuation Pans**: to be followed during disasters through the prominent display of exit and evacuation route maps at strategic locations throughout the hospitalpremises.

Hospitals shall also ensure that their alarms, emergency communication and Hospital Safety and Security Procedures, adequately take into consideration the needs of patients, their attendants and visitors; and ensure that no panic and chaos is initiated.