

DISASTER MANAGEMENT IN HOSPITALS:HOW WELL ARE WE PREPARED

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ABSTRACT

Both remedial and preventive health care services may become difficult or impossible to provide. The ability of hospitals to function largely depends on lifelines and other basic services such as electrical power, water and **sanitation**, communications, and waste management and disposal. Hospital authorities, cognizant of the facts outlined above frequently produce emergency response plans-but such plans often fail to incorporate prevention and mitigation measures, or to strengthen the role of hospital disaster committees in risk management. Hence the need to incorporate measures for improving general safety and preserving the functionality of the key areas of the hospital which include emergency services, intensive care units, diagnostic facilities and food and drug storage.

Keywords: disaster, hospital, mass causality, line of authority.

1. INTRODUCTION

India has been traditionally vulnerable to natural disasters on account of its unique geo climatic conditions. Floods, droughts, cyclones, earthquakes and landslides have been a recurrent phenomena. About 60% of the landmass is prone to earthquakes of various intensities; over 40 million hectares is prone to floods; about 8% of the total area is prone to cyclones and 68% of the area is susceptible to drought. In the decade 1990-2000, an average of about 4344 people lost their lives and about 30 million people were affected by disasters every year. The loss in terms of private, community and public assets has been astronomical.

The super cyclone in Orissa in October, 1999 and the Bhuj earthquake in Gujarat in January, 2001 underscored the need to adopt a multi dimensional endeavour involving diverse scientific, engineering, financial and social processes; the need to adopt multi disciplinary and multi sectoral approach and incorporation of risk reduction in the developmental plans and strategies.

1.1 DISASTER:

WHO(World health Organisation) defines disaster as any occurrence that causes damage, ecological disruption, loss of human life and deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community.

Classification of disaster:

Since there are many kinds on which the disaster are classified but the most popular ways is to classify them according to the source.They are classified into two major parts:

1. Natural disaster – Disasters which are caused by the nature are natural disasters. They are further classified as-

- Meteorological disaster-stroms(cyclone, hurricane, tornadoes, typhoons), Cold spells, Heat waves and Droughts.
- Typological disaster- Avalanches, Landslides and Floods.
- Telluric and Teutonic-Earthquakes, Tsunamis and Volcanic eruption.
- Biological disaster-Epidemic of communicable diseases.

2. Manmade disaster- The disaster which are caused by the accidents and creation of human interfance are manmade disaster.They are classified as-

- Civil disturbances-Riots and Demonstration.
- Warfare-Conventional warfare.
- Non Conventional warfare-Chemical, Nuclear and Biological warfare, Terrorism.
- Accidents-Collapse of Dams,buildings and other structures, mines disaster.
- Technological failures-mishap at a nuclear power station,etc.

1.II GDP GROWTH IN INDIA:

Real GDP growth for 2009-10 is revised upwards to 6.7 per cent from a 6.2 per cent projected earlier. This revision was warranted because of less damage to the smaller crops than anticipated earlier. But above the the government is spending crores of rupees in rehabilitation of disaster sufferers but still they are not getting enough attention as required by the government. The policies and schemes that run for the benefit of the sufferers the due help does not reach on time nor it has been reached to them so late that the suffering are increased much higher rather than too be reduced.

1.III HOSPITALS-

A hospital is an institution for health care providing patient treatment by specialized staff and equipment, and often but not always for providing for longer-term patient stays.

3. MAJOR DISASTERS IN INDIA:

• CYCLONE:

In meteorology, a cyclone is an area of closed, circular fluid motion rotating in the same direction as the Earth. This is usually characterized by inward spiraling winds that rotate counter clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere of the Earth. Most large-scale cyclonic circulations are centered on areas of low atmospheric pressure. Table 1

• EARTHQUAKES:

An earthquake (also known as a quake, tremor, or temblor) is the result of a sudden release of energy in the Earth's crust that creates seismic waves. Earthquakes are recorded with a seismometer, also known as a seismograph .Table 2

4. ROLE OF HOSPITALS IN PRESENT SCENARIO:

WHO has a six point agenda for changing public health through the help of hospitals:

1. Promoting development. This includes helping impoverished countries to gain access to health care and preventing and treating chronic and tropical disease around the world.
2. Fostering health security. This agenda item deals with outbreaks of infectious disease, diseases caused by urbanization or environmental factors, food production and the use of antibiotics.
3. Strengthening health systems. This includes providing staff, financing and systems for technology and essential drugs.
4. Harnessing research, information and evidence. WHO sets standards and communicates about research results around the globe.
5. Enhancing partnerships. WHO aids organizations worldwide to collaborate and communicate, from UN agencies to international donors and organizations.
6. Improving performance. WHO aids in reforms for its own efficiency as well as the activities it monitors.

5. OBJECTIVES OF HOSPITALS DURING DISASTER:

In case of external mass accidents the goals are:

- to control the large number of patients and the resulting problems as good as possible
- by enhancing the capacities of admission and treatment,
- by treating patients based on the rules of individual medicine despite a greater number of patients
- by ensuring ongoing proper treatment for all patients who were already there
- by a smooth handling of all additional tasks caused by such an event.
- to support the damage area by means of medical consultation, medicaments, infusions, dressing

material and any other necessary medical equipment

In case of an internal major accident (i.e., fire, explosion) the goals of appropriate, prepared measures are to protect men, environment and properties as good as possible from any damage through

- by putting into effect the prepared measures,
- by appropriate behaviour of the staff who has to know its tasks for this case and has to give correct instructions,
- by supporting help from outside in an optimal way,
- To re-establish as quickly as possible an orderly situation enabling a return to normal work conditions.

In addition, a concept for internal as well as for external events has to be prepared

- for an optimal protection of patients, employees and rescue personnel
- to ensure the required handling for a quick preparedness on bases of the daily organization structures
- to guarantee a flexible and direct management at all times
- to realize an effective coordination of the available internal and external forces and resources.

6. MAIN OBJECTIVES AND PURPOSE OF HOSPITAL DISASTER PLAN:

- To provide policy for response to both internal and external disaster situations that may affect hospital staff, patients, visitors and the community.
- Identify responsibilities of individuals and departments in the event of a disaster situation.
- Identify Standard Operating Guidelines (SOG's) for emergency activities and responses.

7. ORGANISATION (General Consideration)

- **Lines of Authority:** The following persons, in the order listed, will be in charge:

1. Administrator.
2. Director of Nursing.
3. Nursing Supervisor on duty at time of disaster.
4. Emergency Room Supervisor.

- **Supplies and Equipment:**

1. Extra supplies will be obtained from Purchasing personnel through runners.
2. Outside supplies will be ordered by the Purchasing Director and brought into the hospital via the loading dock.

- **Public Communication Center:**

1. A communication center for receiving outside calls and giving information to the press, radio and relatives shall be set up in Medical Records.
2. The press can use the restaurant as their headquarters.

- **Communications:**

1. A Command Center will be set up at the Security Desk to handle and coordinate all internal communications. All department heads or their designee will report to this office and call as many of their employees as needed.
2. The person in charge when the disaster happens will assign a nurse to the communications system in the E.R. This nurse will answer all radio calls from this station.

8. THE FACTORS INFLUENCING EMERGENCY RESPONSE FOR MAJOR INCIDENTS:

The review of the London bombings showed a quick and effective response to the serial explosions. The main successful elements in the London bombings were effective emergency planning, continuous training and exercise, proactive risk management, application of incident command system, strict adherence to health and safety procedures, communication disturbances leading to the application of other methods of communication, innovative and controlled public information systems, organised

mental health response, and business continuity planning leading to quick and controlled transport of 450 victims to various hospital in an organised manner. During the Delhi bombings, in contrast, the review provided the evidence of absence of implementation of almost all of the above factors leading to a much poorer response.

9. STEPS TAKEN BY GOVERNMENT:

Health Preparedness: A 200 bedded mobile hospital, fully trained and equipped is being set up and attached to a leading Government hospital in Delhi. Three additional mobile hospitals with all medical and emergency equipments are proposed to be located in different parts of the country. These mobile hospitals will also be attached to the leading Government hospitals in the country. This will enable the mobile hospitals to extend assistance to the hospitals with which they are attached in normal time. They will be airlifted during emergencies with additional doctors/paramedics taken from the hospitals with which the mobile hospitals are attached to the site of disaster.

Hospital Preparedness and Emergency : Hospital preparedness is crucial to any disaster response system. Each hospital need to have an emergency preparedness plan to deal with mass casualty incidents and the hospital administration/ doctor trained for this emergency. The curriculum for medical doctors does not at present include Hospital Preparedness for emergencies. Therefore capacity building through in-service training of the current health managers and medical personnel in Hospital Preparedness for emergencies or mass causality incident management is essential. The hospitals have to prepare themselves for two major components:

a. Response to specific events:

- Adoption of specific techniques to reduce the damage potential.
- Strategies of long term response to the risk.

b. Adjustment to the risk:

- Behavior during the disaster.
- Recovery after disaster.

10. FUTURE VISION IN DISASTER MANAGEMENT

It is a multisectoral, multidisciplinary subject, which involves many role players (Govt./NGOs/Community). They should work together for the goal of a disaster free India which should include disaster preparedness and mitigation alongwith disaster response. By these approaches we can reduce the impact of various disaster and can have safer communities. Steps for mitigation of the situation in anticipation of floods may include advance preparedness, construction of shelters, setting up of control rooms for cordination of all rescue and relief efforts. The nodal agency for disaster management in the country, the ministry of Home. Affairs in collaboration with the United Nations Department for Agriculture Forest Services (UNDAFS) has been setup which is envisaged as an online resource inventory for disaster management but disaster mitigation, the severity and natural extent of a natural disaster remains outside, mortal hands. However with proper management and foresight the loss of life and property in such incidents can be prevented.

CONCLUSION:

Our vision 2020 is to build a safer and secure India through sustained Collective effort, synergy of national capacities and people's participation. What looks a dream today will be transformed into reality in the next two decades. This is our goal and we shall strive to achieve this goal with a missionary zeal. The path ahead, which looks difficult today, will become a lot easier as we move along together.

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Table 1

TYPE	EFFECTED STATES/CITY	YEAR	LOSS OF LIFE/AREAS
Cyclone	Calcutta and deltaic areas	1737	3,00,000
Cyclone	Rameswaram	December 1964	Dhanuskodi
Cyclone	Bangla Desh	8-13 November 1970	3,00,000
Cyclone	Andhra	14-20 November 1977	10,000

Source: www.imd.gov.in

Table 2

TYPE	EFFECTED STATES/CITY	YEAR	Magnitude
Earthquakes	KUTCH, GUJARAT	1819 JUN 16	8.0
Earthquakes	SHILLONG PLATEAU	1897 JUN 12	8.7
Earthquakes	BIHAR-NEPAL BORDER	1934 JAN 15	8.3
Earthquakes	JABALPUR MP	1997 MAY 22	6.3

Source: www.imd.gov.in