

# Disaster Management

## 1. Disaster-

### Defination -

- Disaster is defined as an event or a calamity resulting desperate things such as human casualties (injuries & deaths), destruction, loss of properties, disruption of normal activities occurring in a scale sufficient to require assistance from outside the affected area.

### Types -

#### i) Natural Disasters -

##### a) Natural phenomenon Beneath the Earth's surface -

- Earthquake
- Tsunamis
- Volcanic eruptions

##### b) Natural phenomenon at the Earth's surface -

- Landslides
- Avalanches

##### c) Natural phenomenon above the Earth's surface -

- Windstorms (Cyclone, Typhoon, Hurricane)
- Tornadoes
- Hailstorms
- Floods
- Droughts, Sea surges, etc.

## ii) Man-made Disasters —

### a) Caused by Warfare —

- Conventional
- Nuclear
- Biological
- Chemical

### b) Caused by accidents —

- Vehicular — Air crafts, train, ship, four & two wheelers.
- Building collapse
- Explosions
- Drowning
- Fires
- Biological, chemicals including poisoning.

## Man-Made Disasters —

— Man-made disasters are events resulting from human actions, negligence or failure of man-made systems that cause significant damage, injury or loss of life.

### Impact of Man-made disasters —

- High mortality and morbidity.
- Long term environmental damage (radiation, chemical contamination).
- Psychological trauma, displacement, unemployment.
- Economic loss and burden on health services.



Ex: Bhopal Gas Tragedy 1984

Chernobyl accident

### Disaster Management Cycle —

— Components of Disaster Management Cycle is as follows :

#### a) Disaster Impact —

- The period of impact may be few minutes in case of earthquakes, hours in cyclones and days in floods.
- The greatest need is the emergency care to be given in the first few hours.
- Search, rescue and first aid — It is the uninjured survivors who come to immediate help.
- Field care — Food to be provided at the place of disaster. People are sheltered in tents, schools and community halls.
- Doctors, nurses and other volunteers, police, homeguards are deployed to the place.
- Triage : Since the health manpower resources are in shortage the injured survivors are classified depending upon the severity.
- The Triage approach system consists of color coding of the victims in priorities, carried out at the site.

#### b) Response →

- Relief phase — help or assistance is obtained from outside, arrangements are made to provide food, clothes, shelter & drugs.

- Factors influencing outbreak of diseases are overcrowding, poor sanitation, lack of proper water supply, disruption of health programs, displacement of people.
- Mass immunization against cholera, typhoid, & TT injection recommended for health care providers.
- Since malnutrition is likely to occur, measures are taken to strengthen the food supplies.

#### c) Rehabilitation →

- This should be started from the time of onset of disaster to restore the normal conditions of life.
- Services include proper water supply and food supply, improvement of sanitation, control of vectors and care of survivors.

#### d) Mitigation →

- It involves measures to lessen the likely effects of emergencies and protection of vulnerable population and structures.
- Mitigation complements the disaster preparedness & disaster response activities.
- It ensures the safety of health facilities and public health services including water supply and sewage system reduces the cost of rehabilitation and reconstruction.

#### e) Preparedness →

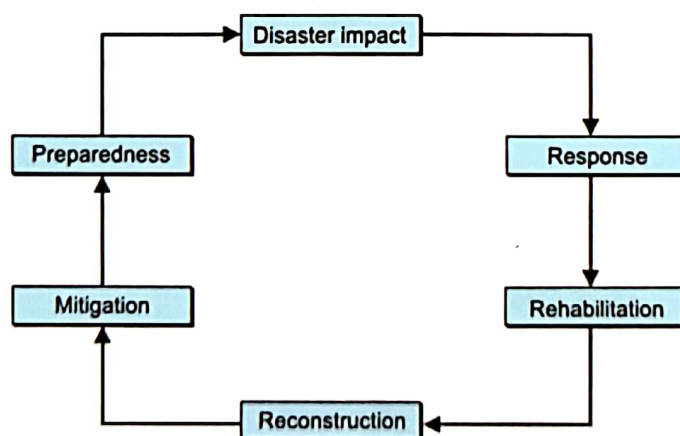
- This consists of strengthening the capacity of a country to manage efficiently all types of emergencies, so that the resources



should be able to provide assistance to the victims & bring back the life to normal.

- Preparedness should start from the community people because many times the external agency may not arrive for days to the affected area, specially if transportations & communications are affected.
- Health workers, social workers & members of NGOs are trained.
- Preparedness should be in the form of money, manpower, & materials.
- Disaster preparedness is a continuous, ongoing multisectorial activity.

Flow chart 45.1 Disaster management cycle



## 2. Triage-

- Triage is the process of sorting casualties in a disaster or emergency situation according to the severity of injuries and chances of survival, to ensure optimum use of limited medical resources.
- It is carried at the disaster site

## Principle -

- Do the greatest good for the greatest number.
- Priority is given to patients who can benefit most from immediate treatment.

## Colour coding -

### i) Priority I - Red Tag (Immediate)

- Critically ill patients needing immediate medical / surgical treatment within 6 hours.

Ex:- Severe bleeding, airway obstruction, shock.

### ii) Priority II - Yellow Tag (Delayed)-

- Moderately ill or moderately risk cases requiring treatment within 24 hrs.

Ex:- Fractures without shock, large wounds.

### iii) Priority III - Green Tag (Minimal)-

- Ambulatory patients of minimum risk cases (walking wounded).

Ex:- minor lacerations, abrasions.

### iv) Priority IV - Black Tag (Expectant / Dead)-

- Dead or moribund patients with little chance of survival even with care.
- Managed last, after the salvageable are treated.