

Disaster Management

Definition of Disaster:

According to WHO “Any occurrence that causes damage, economic disruption, loss of human life and deterioration in the health and the health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area is called disaster”

Definition Disaster Nursing:

Disaster nursing can be defined as the adaptation of professional nursing skills in recognizing & meeting the nursing physical and emotional needs resulting from a disaster. The overall goal of disaster nursing is to achieve the best possible level of health for the people and the community involved in the disaster.

OR

“Disaster nursing is nursing practiced in a situation where professional supplies, equipment, physical facilities and utilities are limited or not available”

DISASTER alphabetically means

D – Destructions

I – Incidents

S – Sufferings

A – Administrative, financial failure.

S – Sentiments

T – Tragedies

E – Eruption of communicable diseases

R – Research programmed & its implementation

Types of Disaster:

1. Manmade disaster such as War, Nuclear accidents, Famine, Riot etc.
2. Natural disaster such as Cyclone, Flood, Earth quake.

Manmade disaster: Many countries of the world and nations are still suffering from of humanitarian disaster, for example; War/ civil war these armed conflicts may create disastrous situation.

Nuclear accidents: today nuclear energy used in many sectors such as industry, electricity, medical science etc. for these there are a number of nuclear projects all over the world. Any accidents in these projects will make fatal disaster. This is a dangerous as explosion of atom bomb.

Natural disaster:

1. **Cyclone:** Cyclones are essentially tropical revolving storms these frequently occur during early summer & late autumn. Heavy cyclones that produce rotating wind currents with a velocity of 100 to 400km/h and a displacement speed of 50 to 70 km/h may cause a great disastrous condition. The coastal people of Bangladesh are facing such as disaster periodically.
2. **Flood:** It is an abnormal great flow of water. As a result of flood, the river banks are overflow and large areas of agricultural lands and human dwelling are submerged under water. It stops the national progress again and again.
3. **Earthquake:** It is a convulsion of earth's outer layer. Generally the ground is felt undergoing and makes a great disaster.

Common features of disaster:

1. Many of the affected persons are physically injured.
2. Destruction of communication with the affected area.
3. Problems of shelter, food and drinking water.
4. Lack of sanitation.
5. Possible outbreak of epidemics.

Effects of disaster:

- ✚ Deaths of man and animals.
- ✚ Disability
- ✚ Increase in communicable disease.
- ✚ Psychological problems.
- ✚ Food shortage due to damage of crops, stored, food, clothing, water supply etc.
- ✚ Direct environmental risks
- ✚ Socioeconomic losses.
- ✚ Shortage of drugs and medical supplies and occurrence of deaths, injuries and disability.
- ✚ Destruction of houses, educational industries, hospitals etc.
- ✚ Water pollution due to over flooding of ponds, tanks river etc.
- ✚ Epidemic air born diseases and water born diseases due to contact shelter and water pollution.

Emergency supplies that nurses should have ready:

1. Identification badge and driver's license.
2. Prof of licensure and certification (RN, CPR/AED, First Aid)
3. Pocket size reference books (nursing protocols and intervention standards)
4. Blood pressure cuff (adult and child) and stethoscope

5. Gloves, mask, other personal protective equipment (PPE) for general care.
6. First aid kit with mouth to mouth CPR barrier.
7. Radio with batteries and cell phone charger.
8. Cash, credit card.
9. Important papers.
10. Sun protection.
11. Sturdy shoes with socks
12. Medical identification of allergies, blood type.
13. Medications for self
14. Weather appropriate clothing to include rain gear.
15. Toiletries
16. Watch, cell phone, PDA with pre-centered emergency numbers
17. Flashlight, extra batteries
18. Record keeping materials to include pencil/pen.
19. Map of area

Prevention of disaster: *There are 5 phases in the disaster prevention cycle identified as:*

1. Pre-disaster phase
2. Pre-impact phase
3. Impact phase
4. Relief phase
5. Rehabilitation phase

Prevention of disasters involves three basic aspects:

1. Disaster preparedness
2. Disaster response
3. Disaster mitigation

Various actions to be taken during each phase are listed below;

1. **Pre-disaster phase; inter-disaster phase:** This is ideal time for prevention and preparedness;
 - Careful analysis past disaster
 - Advance planning, learning from the past.
 - Preparation of health services to take timely action
 - Integrated health care facilities
 - Fully equipped hospital with disaster response teams
 - Linking of hospitals
 - Good transport facilities

2. **Pre-impact phase:** this is the period during which indication of implementing disaster are accumulating. Evaluation of population is very important in this phase and so that appropriate prediction techniques should be developed –
 - Timely forecast of warning (cyclone alert) helps in early evacuation of population
 - Reconstruction of weakened building and use of appropriate designs to increase resistance.
3. **Impact phase:** This is the period which disaster strikes, leading to destruction and deaths. Telecommunication and transport may be cut off. In this phase preparation should be taken –
 - Local resources utilization
 - Community training in first aid
 - Strengthen primary health care
 - Decentralized pre –disaster planning at the community level.
 - Education of community.
4. **Relief phase:** In this place external agencies reaching the disaster affected area and helped to affected people. For this health information is needed-
 - Information on disability and injuries
 - Base line data on the site of impact
 - Detailed information on health facilities existing
 - Quick survey of medical supplies
 - Survey of water and sanitation system

Measures in the relief phase

- i. Acquisition
- ii. Transportation
- iii. Storage
- iv. Distribution

5. **Rehabilitation phase:** This involves restoration of pre-disaster conditions. Measures involved may be-
 - i. Sanitary measures
 - ii. Medical measures
 - iii. Reconstruction
- i. **Sanitary measures: It includes –**
 - Accommodation of refuses
 - Safe water supply
 - Safe excreta disposal

- Vector control measures
- Provision of dwellings
- ii. Medical measures includes**
 - Conduct of medical camps
 - Provision of drugs
 - Vaccination campaigns
 - Provision of adequate nutrition
- iii. Reconstruction:**
 - Reconstruction and rehabilitation are time consuming. so reconstruction of the damaged area needed for national disaster management plan
 - Planner should play not only households public building but also industry, agriculture and all other socio-economic aspects of reconstruction.
 - The national authorities responsible for rehabilitation should establish priorities; prepare plans, reconstruction roads and public buildings etc.

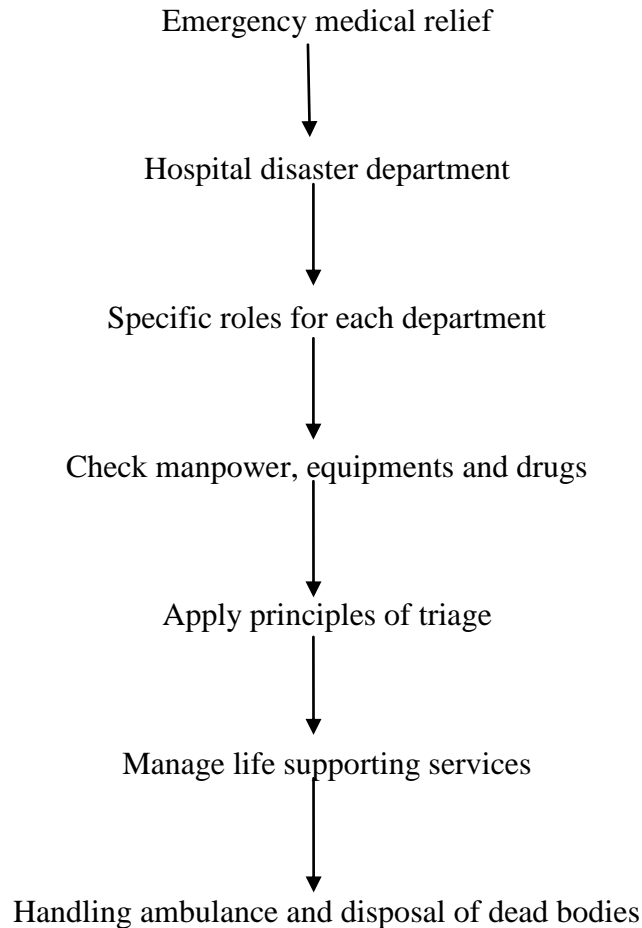
Goals for disaster reduction:

1. Create public awareness about safety measure
2. Legislations for safety from disaster
3. Planning development of areas with safety
4. Protection of habitants from adverse disaster impacts
5. Construct new building safe from disaster
6. Retro-fitting existing building for improving disaster resistance.

Steps of preparedness program:

1. Vulnerability analysis/ vulnerability assessment of buildings
2. Training in disaster response in social workers, local volunteers etc.
3. Develop information technology
4. Disaster mitigation – community level education for disaster preparedness
5. Disaster management committee – international and voluntary agencies.
6. Local agencies for provision of emergency medical service and relief activities
7. Mass media
8. Training on first aid for health facilities.

Chronological action plan for disaster management:



Disaster management committee:

The following members would comprise the disaster management committee under the chairmanship of medical superintendent/ director.

- i. Medical superintendent/ director
- ii. Additional medical superintendent
- iii. Nursing superintendent/ chief nursing officer
- iv. Chief medical officer (causality)
- v. Head of departments – surgery, medicine, orthopedics, radiology, anesthesiology, neurosurgery
- vi. Blood bank incharge
- vii. Security officers
- viii. Transport officer
- ix. Sanitary personnel

Logistic support system

- i. Resuscitation equipments
- ii. IV sets, IV fluids
- iii. Disposable needles, syringe and gloves
- iv. Dressing and suturing materials and splints
- v. Oxygen masks, nasal catheters, suction machine and suction catheters
- vi. ECG monitors, defibrillators, ventilators
- vii. Cut down sets, tracheostomy sets and lumbar punctures sets
- viii. Linen and blankets
- ix. Keys of these cupboards should be readily available at the time of disaster.