

A dramatic scene of the RMS Titanic at night, illuminated by its own lights and the moon. The ship is shown from a low angle, emphasizing its massive scale. The word "WELCOME" is superimposed in large, bold, red capital letters across the center of the ship's hull. The ship's four funnels are visible, and the water is dark with some whitecaps. The overall mood is one of grandeur and mystery.

WELCOME

ROLE OF A NURSE IN DISASTER MANAGEMENT

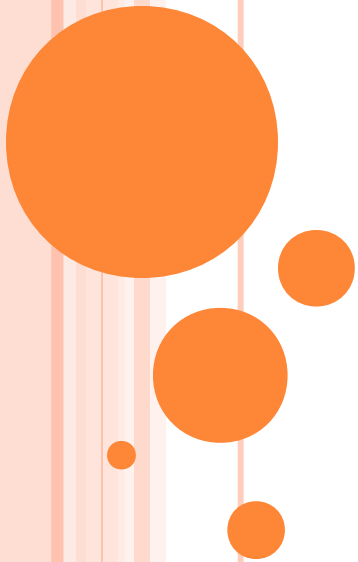
**Dr.Nilima Sonawane
M Sc Nursing ,MPhil
Phd (Nursing)**



NURSES AND EDUCATION

- Education is the most powerful weapon which you can use to change the world.

Nelson Mandela



MISSION STATEMENT

- A disaster is a catastrophic incident that commonly leads to immense damage and devastation. Whether the cause of the event is natural or man-made, the outcomes can be shocking. Preparedness is one of the major components of disaster response. Nurses comprise the largest healthcare workforce and are working at the frontline of the healthcare response to disasters, thus their capacity building can be achieved by training and skill development.



LECTURE OUTLINE



1. Definition of disaster
2. Phases of disasters
3. Impact of disaster on health and the health services
4. Community participation in disaster management.
5. Role of nursing professionals in various phases of disasters.



DISASTER



- Disaster is any occurrence that causes damage, ecological disruption, loss of human life or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area.

(WHO 1995)



TYPES

- Natural
- Man made
- Mixed





World Health
Organization

Time trend of natural disasters*

1975 - 2005

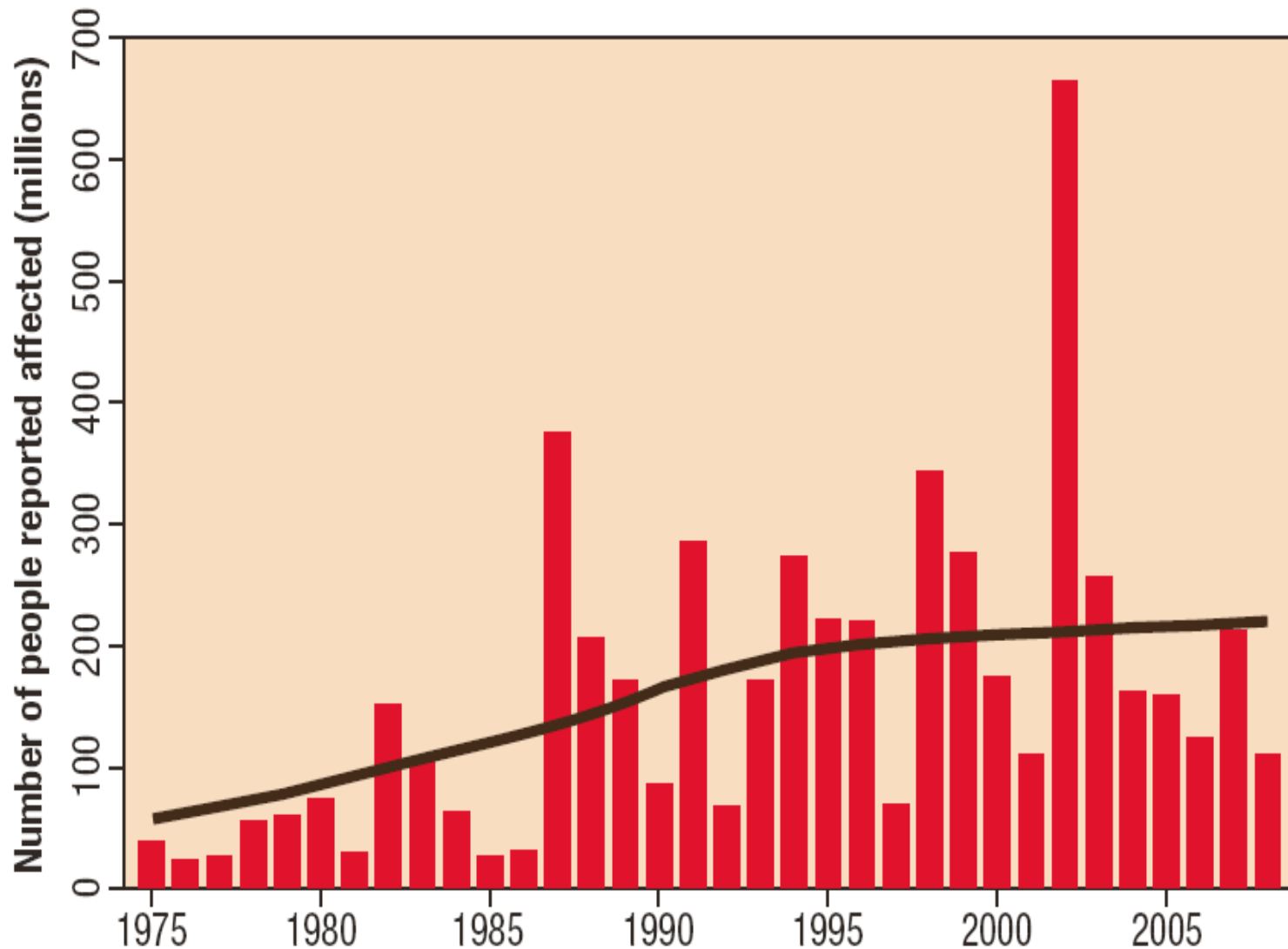


* Natural disasters = Country-level disasters

Source: CRED 2005 disasters in numbers



Number of people reported affected by natural disasters 1975–June 2008

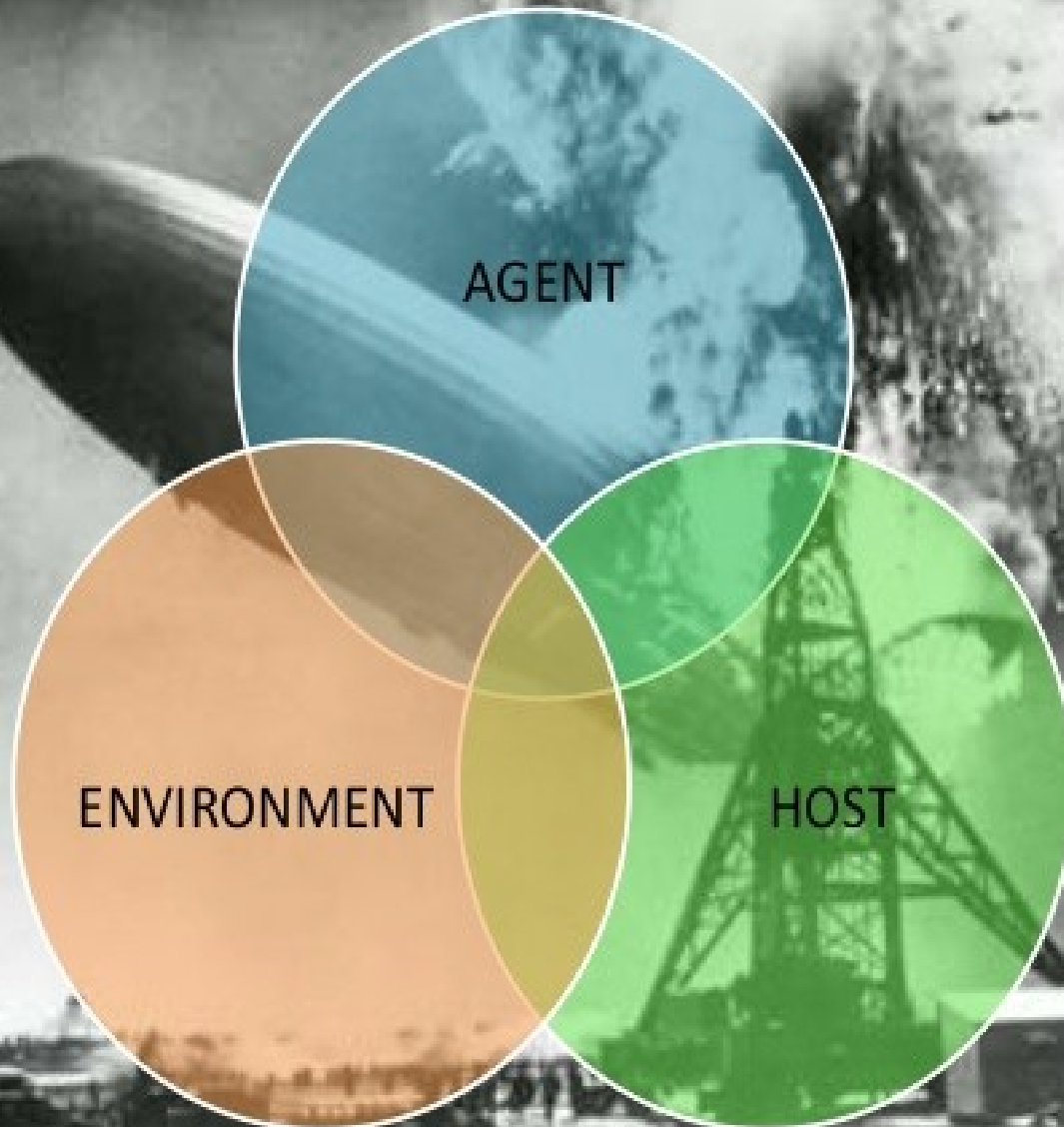


MAN-MADE VS NATURAL DISASTER

- Unpredictable
- Unexpected
- Disruptive
- Target
- Dangerous
- Casualties focused
- Difficult to management
- Sentiment and feeling
- Never ending




EPIDEMIOLOGY OF DISASTER



DISASTER AGENT

- ❑ Primary agents include falling buildings, heat, wind, rising water and smoke.**
- ❑ Secondary agents include bacteria and viruses that produce contamination or infection after the primary agent has caused injury or destruction.**

HOST

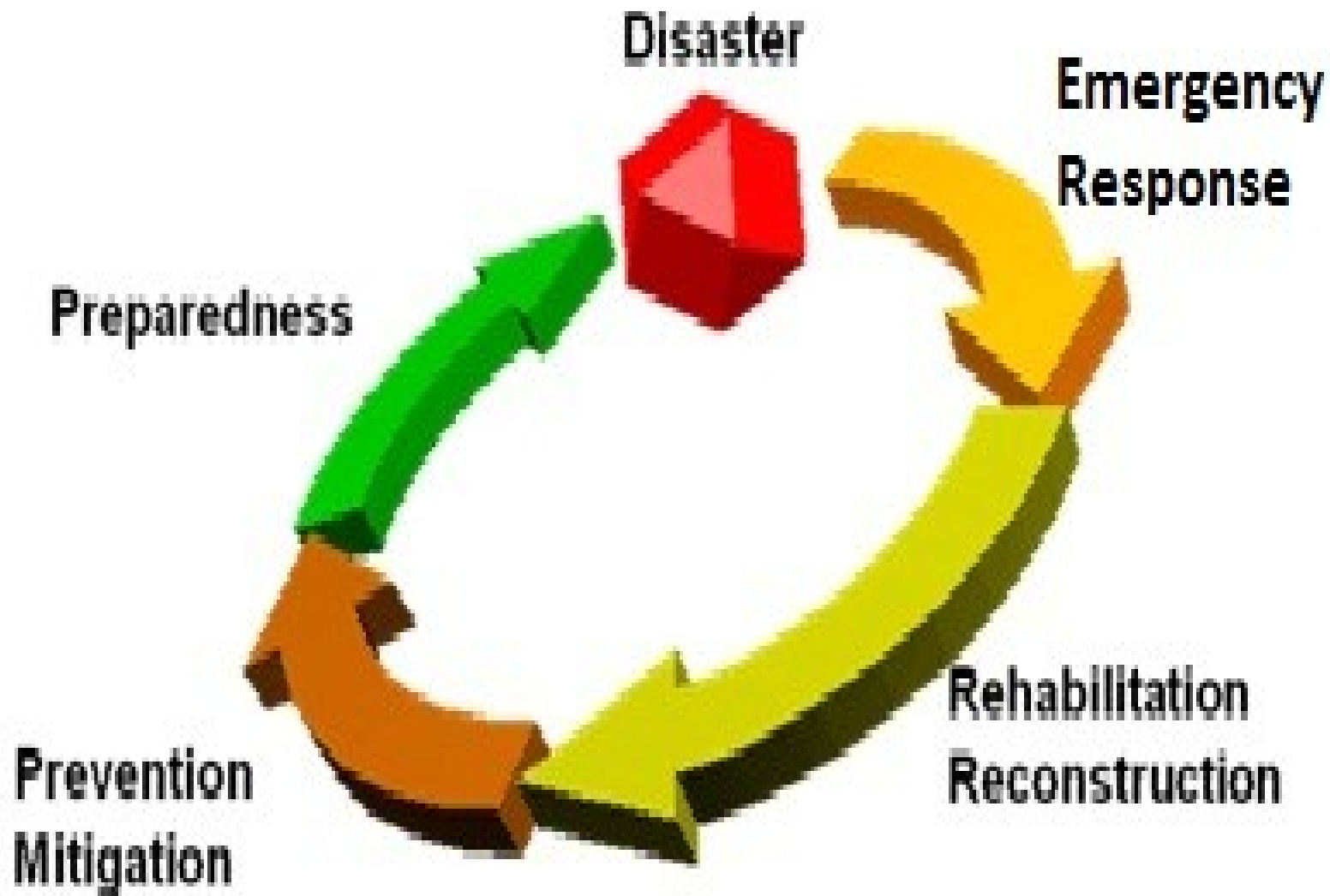
- ❑ Human kind.**
 - ❑ Age, sex, immunization status, pre-existing health, degree of mobility, emotional stability,**
- 

ENVIRONMENT

- ❑ **PHYSICAL FACTORS**
- ❑ **CHEMICAL FACTOR**
- ❑ **BIOLOGICAL FACTORS**
- ❑ **SOCIAL FACTORS**
- ❑ **PSYCHOLOGICAL FACTORS**



PHASES OF THE DISASTER



DISASTER MITIGATION

Disaster mitigation refers to actions or measures that can either prevent the occurrence of a disaster or reduce the severity of its effects.
(American Red Cross).

- Mitigation activities include awareness and education and disaster prevention measures.
- Activities that reduce or eliminate a hazard
 - Prevention
 - Risk reduction
- Examples
 - Immunization programs
 - Public education



DISASTER PREPAREDNESS



- **Disaster preparedness** refers to measures taken to prepare for and reduce the effects of **disasters**. That is, to predict and, where possible, prevent **disasters**, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences.

DISASTER PREPAREDNESS

Activities undertaken to handle a disaster when it strikes.

- Activities
 - Disaster Preparedness Plan
 - Emergency communication plan
 - Prevent spread of disease outbreak
 - Public Education and awareness



DISASTER IMPACT AND RESPONSE

- Activities a hospital, healthcare system, or public health agency take immediately before, during, and after a disaster or emergency occurs.
- Search , rescue and first aid ,field care , triage activation , referral services clearing debris, and feeding and sheltering victims .



DISASTER RECOVERY , RECONSTRUCTION AND REHABILITATION

- Getting a community back to its pre-disaster status
- Activities
 - Debris Removal
 - Care and Shelter
 - Damage Assessments
 - Funding Assistance
 - Emotional care



IMPACT OF DISASTERS

- Death
- Severe injuries requiring extensive treatment
- Increase risk of communicable diseases and epidemics outbreak
- Excess NCD mortality
- Mental health (disaster syndrome)
- The destruction of the health care infrastructure,
- Damage water supply and basic sanitation
- Food shortage and Malnutrition
- Population movement and migration



THE MOST VULNERABLE



DISASTER MANAGEMENT

It can be defined as the effective organization, direction and utilization of available counter-disaster resources



Brad Mellon, American Red Cross, San Diego/Imperial Counties Chapter

PRINCIPLES OF DISASTER MANAGEMENT (GRAB AND ENG 1995)

- ❑ Prevent the occurrence of the disaster whenever possible.**
- ❑ Minimize the number of casualties if the disaster cannot be prevented.**
- ❑ Prevent further casualties from occurring after the initial impact of the disaster.**
- ❑ Rescue the victims.**
- ❑ Provide first aid**
- ❑ Evacuate the injured to medical facilities.**
- ❑ Provide definitive medical care.**
- ❑ Promote reconstruction of lives.**



DISASTER PREPAREDNESS

- **Aims of disaster plans**
- To provide prompt and effective medical care to the maximum possible in order to minimize morbidity and mortality.
- **Objectives**
- To optimally prepare the staff and institutional resources for effective performance in disaster situation.
- To make the community aware of the sequential steps that could be taken at individual and organizational levels.



THREE FUNDAMENTAL ASPECTS OF DISASTER MANAGEMENT

Disaster
Response

Disaster
Preparedness

Disaster
Mitigation



What is Disaster Management?

Preparedness -- activities prior to a disaster.

Examples: preparedness plans; emergency exercises/training; warning systems.

Response -- activities during a disaster.

Examples: public warning systems; emergency operations; search and rescue.

Recovery -- activities following a disaster.

Examples: temporary housing; claims processing and grants; long-term medical care and counseling.

Mitigation - activities that reduce the effects of disasters.

Examples: building codes and zoning; vulnerability analyses; public education.

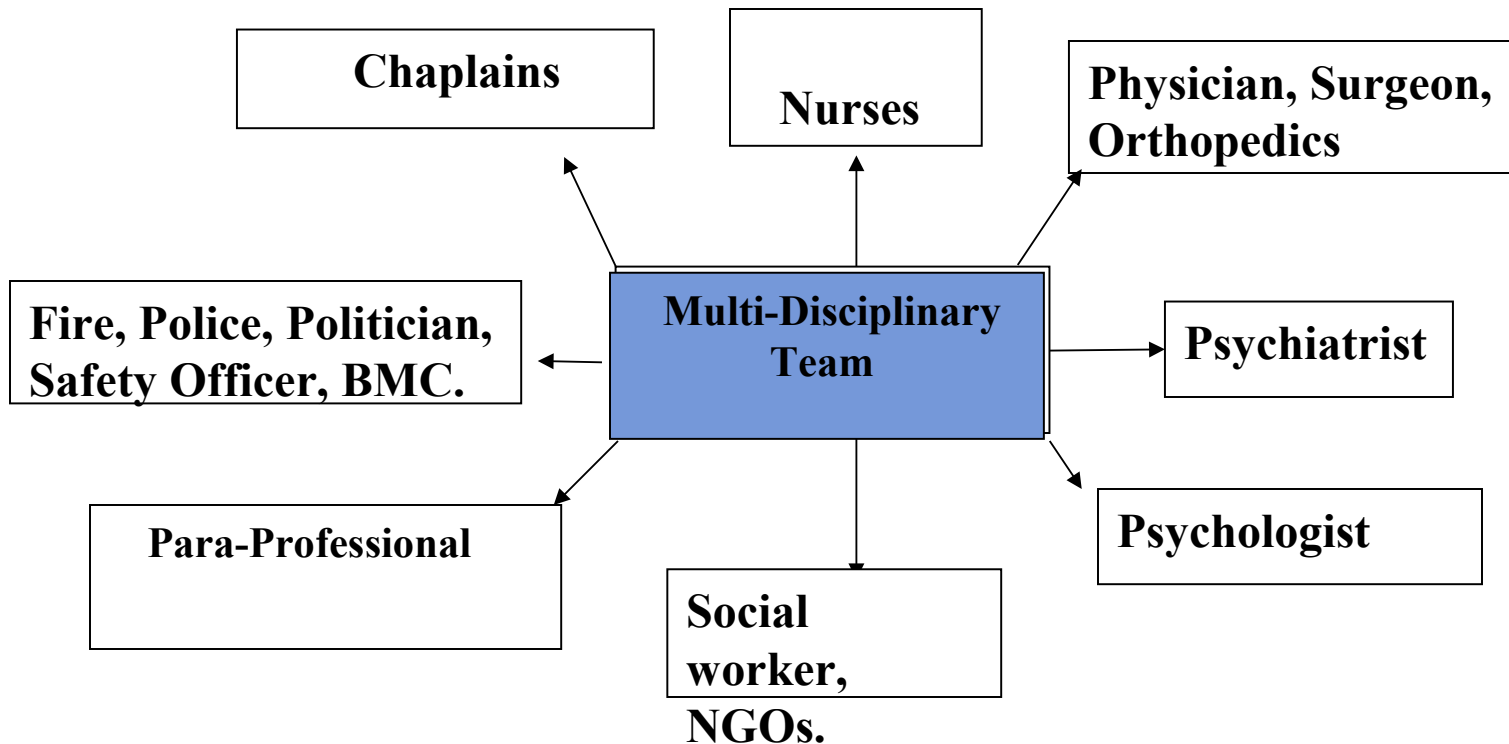


DISASTER MANAGEMENT COMMITTEE

- Chairman , Medical superintendent/ Director
- Additional Medical Superintendent
- Nursing Superintendent/ Chief Nursing Officer
- Chief medical officer (casualty)
- Head of departments- surgery, medicine, orthopedics, radiology, anesthesiology, neurosurgery
- Blood bank in charge
- Security officers
- Transport officer
- Sanitary personnel



MULTIDISCIPLINARY DISASTER MANAGEMENT TEAM



Disaster Nursing



QUALITIES OF A NURSE WORKING IN DISASTERS

Confidence

- Cooperation
- Commitment
- Coordination
- Control
- Value of human life
- Gentleness and devotion
- Strength
- Trust
- Interdependence and Team spirit
- Accept Self criticism
- Toughness & Sensitivity
- Leadership
- Responsibility and accountability



DISASTER NURSING

Disaster nursing can be defined as the adaptation of professional nursing skills in recognizing and meeting the physical, health and emotional needs of the affected community resulting from a disasters.

NURSING GOAL

To achieve the best possible level of health for the people and the community affected by disasters.



ROLE OF NURSING IN DISASTI



Disaster preparedness, including risk assessment and multi-disciplinary management strategies at all system levels, is critical to the delivery of effective responses to the short, medium, and long-term health needs of a disaster-stricken population.

International Council of Nurses (2006)






ROLE OF NURSE IN MITIGATION

Measures designed either to prevent hazards from causing emergency or to lesson the likely effects of emergencies .

Community Assessment

knowledge of community resources (e.g., emergency services, hospitals, and clinics), community health personnel, community government officials, and local industry.



DISASTER MITIGATION...

- A structured and logical approach to the identification and management of risks, will assist communities to minimize the likelihood or impact of disasters.

Risk Management

- - Identify Risk
- - Analyze and Evaluate Risk
- - Treat Risk
- - Monitor Risk



ROLE OF A NUESRE IN MITIGATION

ASSESSMENT AND DIAGNOSIS

- Risk assessment and analysis
- Previous disaster
- local climate conducive to disaster formation.
- The magnitude
- The coping strategies of the locals
- Current community disaster plan
- Health personnel available
- Health Facilities available
- Local agencies and organizations.



ROLE OF A NURSE IN DISASTER MITIGATION

- ❑ Diagnose Community Disaster Threats
- ❑ Determine actual and potential disaster threats
- ❑ Preventive measures is been taken care of
- ❑ Is there collabative activites are undertaken
- ❑ Are the people aware about
- ❑ Community preparedness



ROLE OF A NURSE IN MITIGATION.....

- **DIAGNOSIS**

- Diagnose community disaster threats.
- Determine the actual and potential disaster threats.
- effectiveness of Community based disaster plan
- Community awareness
- Community participation



ROLE OF A NURSE IN MITIGATION....

RISK REDUCTION

- Avoid the risk
- Reduce the likelihood of the occurrence.
- Reduce the consequences.
- Accept/Retain the risk.



ROLE OF A NURSE IN DISASTER PREPAREDNESS



Objectives:-

- To insure the appropriate system procedures & resources are in place to provide prompt effective assistance to disaster victims, thus facilitating relief measure & rehabilitation services.



Elements of disaster plan:

- Chain of authority
- Lines of communication
- Modes of transport
- Mobilization
- Warning
- Evacuation
- Rescue and recovery
- Triage
- Treatment
- Support of victims and families
- Care of dead bodies
- Disaster worker rehabilitation.

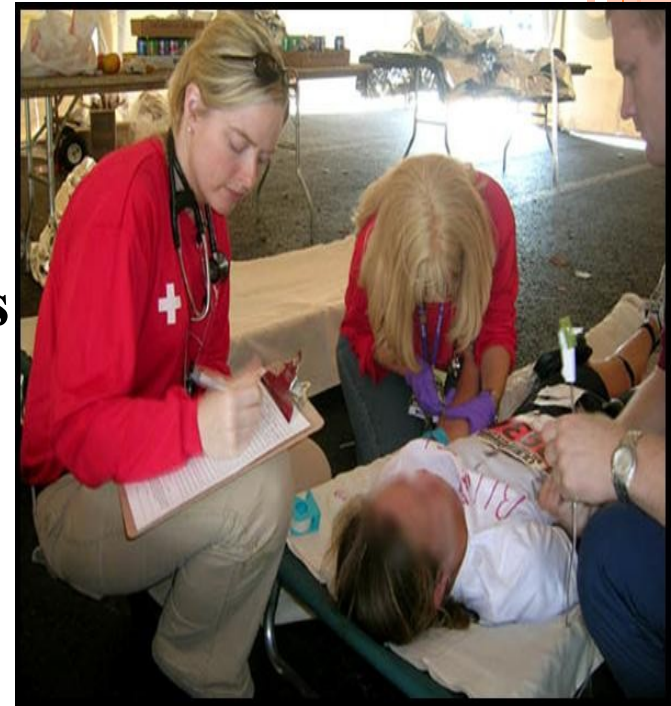


ARE NURSES PREPARED?




ROLE OF A NURSE IN DISASTER PREPAREDNESS...

- **PERSONAL PREPAREDNESS:**
- **Capacity Building**
- **Readiness to work in the multidisciplinary team**
- **Knowledge about community**
- **Types of disaster and its management**
- **Certified first aider and CPR**
- **Knowledge about Policies and protocols**
- **Communication skill**



PROFESSIONAL PREPAREDNESS:

- **Prepared disaster preparedness written plan**
 - **Control room**
 - **Rapid Response Team**
 - **License and health resources**
 - **personal equipment, such as a stethoscope, a flashlight and extra batteries, Cash, Warm clothing and a heavy jacket (or weather-appropriate clothing), Record-keeping materials, Pocket-sized reference books**
- 

PROFESSIONAL PREPAREDNESS:

Disaster management committee

Information and communication

Use of personal protective devices

- * Disaster beds
- * Logistic support system
- * Training and drills.
- Unity of command with mobile van
- Standard operating protocol



❖ *Activation of disaster management plans:*

- “Failure to plan is planning to fail”.
- Develop a standard operating procedure
- Reception area-Disaster control room.
- Triage system
- Documentation at control room
- Public relation
- Crowd management



COMMUNITY PREPAREDNESS

- “A prepared community is one which has developed effective emergency and disaster management arrangements at the local level, resulting in :
 - - Alert, informed and active community which
 - - Supports its voluntary organizations.
 - - Active and involved local government.
 - - Agreed and coordinated arrangement

EMA – Australian Emergency Manuals Series



COMMUNITY PREPAREDNESS

- Education
- First aid program
- Making each home to store
- Emergency telephone numbers
- Battery operated radio
- Flash light
- First aid kit
- Three day supply of water
- Medical information & family physician detail
- Persons to be notified in emergency



ROLE OF A NURSE IN DISASTER IMPACT AND RESPONSE

- “Actions taken in anticipation of, during and immediately after impact to ensure that its effects are minimized and that people are given immediate relief and support”.



DISASTER IMPACT

A set of *principles which provide a* framework for managing any event.

- ☐ Command
- ☐ Control
- ☐ Coordination
- ☐ Communication
- ☐ Clinical Management
- ☐ Continuity
- ☐ Capability



NURSES' TASK IN DISASTERS IMPACT



- Determine magnitude of the event
- Define health needs of the affected groups
- Establish priorities
- Identify actual and potential public health problems
- Determine resources needed to respond
- Collaborate with other professional disciplines, governmental and non-governmental agencies
- Maintain a unified chain of command
- Communication



ROLE OF A NURSE IN DISASTER IMPACT AND RESPONSE

- **Response to alert:-**
- Green :- Additional manpower, less severe
Sudden
- Amber:- Large no. of casualties
- Red: - Major disaster.
- Information to supervisor, prepared mobile van
- Be in multidisciplinary team
- Search , rescue & First Aid
- Distribution of work / delegation of responsibilities.



DISASTER IMPACT AND RESPONSE PHASE IMPLEMENTATION

- ✓ Field care
 - ✓ Triaging and tagging the victim
 - ✓ Care for injured persons
 - ✓ Referral services
 - ✓ Arranging for physical facilities for the victim.
- Effective communication



TRIAGE : THE BEST STRAT

- French verb “trier” means to sort
- Assigns priorities when resources limited



TRIAGE (CATEGORIZING)

- **Red** - high priority
- **Yellow** - medium priority
- **Green** - ambulatory
- **Black** - dead



WHY IS DISASTER TRIAGE NEEDED

Triage consists of rapidly classifying the injured on the basis of their severity of injuries and likelihood of their survival with prompt medical interventions.



ADVANTAGES OF TRIAGE

- Helps to bring order and organization to a chaotic scene.
- It identifies and provides care to those who are in greatest need
- Helps make the difficult decisions easier
- Assure that resources are used in the most effective manner



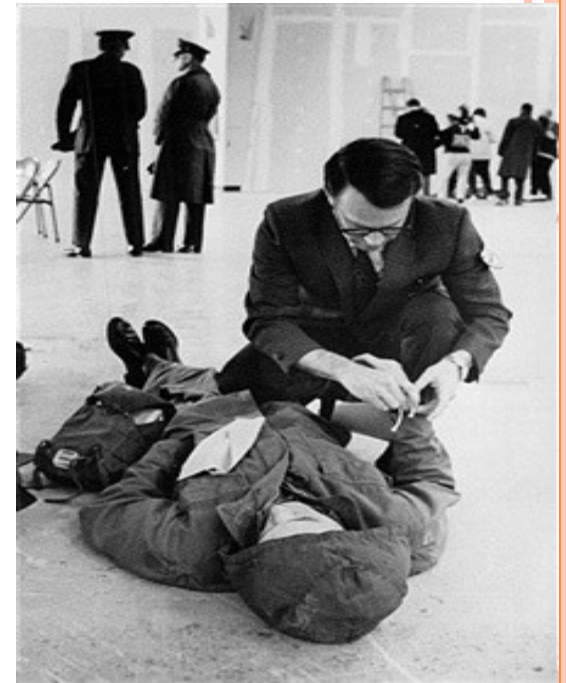
WHO DECIDES IN TRIAGE

- Nurses don't act for legal fears of being blamed for deaths, and lack of clarity on where they fit in the command structure
- Nurses function to the level of their training and experience.
- If nurses they are the most trained personnel the site, they are in charge.



TAGGING IN TRIAGE

- - Name
- - Age /Sex
- - Place of Origin
- - Triage Category
- - Diagnosis
- - Initial Treatment



ROLE OF A NURSE IN DISASTER RESPONSE...

- Immediate post disaster intervention:-
- Establish safety.
- Medical Treatment & Nursing Care as Per Need
- Utilization of Available Resources
- Psychological Support
- Life Saving Measures , First Aid
- Evacuation & Supply - Shelter, Food, Water, Medicine, Communication
- Maintaining Public Moral
- Voluntary Reception, Relatives Waiting Areas
- Management of Infection Control



ROLE OF A NURSE IN DISASTER RESPONSE..

- Re-riving post disaster stress.
- Encourage ventilation.
- Establishing outreach program to provide community support.
- Referral services



MENTAL WELLNESS

- In any major disaster, people want to know where their loved ones are ?
- In case of loss, people need to mourn:
 - Give them space,
 - Find family friends or local healers to encourage and support them
 - Most are back to normal within 2 weeks
 - About 1% to 3%, may need additional help



ROLE OF THE NURSE IN EMOTIONAL FIRST AID

- **Psychiatric disorders:-**
- Acute stress reaction
- Post Traumatic Stress Disorders (PTSD)
- Adjustment disorders
- Depressive disorders
- Acute psychosis
- Dissociative disorders
- Anxiety disorders
- Suicides
- Personality changes
- Crises intervention



ROLE OF A NURSE IN EMOTIONAL FIRST AID

Establish contact

- Taking care of physical needs
- Communicate with them
- Use of drug like sedatives
- Supervision
- Ventilation
- Information meeting
- Re-riving (encouraged to talk about disaster)
- Managing social behavior



MENTAL WELLNESS

- Little attention is paid to the children
- Listen attentively to children without denying their feelings
- Give easy-to-understand answers to their questions
- In the shelter, create an environment in which children can feel safe and secure (e.g. play area)



ROLE OF A NURSE IN RECOVERY, REHABILITATION AND RECONSTRUCTION PHASE

Restoration of the pre – disaster condition

- Surveillance and prevention of epidemic outbreak
- Water supply
- Food supply and safety
- Control of vectors
- Care of survivors,
- Vaccination
- Counseling and
- Behavior modification



REHABILITATION BY HEALTH SECTOR AND MULTIDISCIPLINARY TEAM

❖ RECONSTRUCTION

- Setting up of shelter
- Health, food, and facilities in the campus
- Education
- Training of people/students/volunteers



❖ **SHELTER MANAGEMENT PLANS:**

- Nurse can act as shelter managers
- Listen to the victims
- Encourage victims to overcome the crisis
- Provide the basic resources. like food, water etc
- Provide compassion and dignity to the victim.



REHABILITATION BY HEALTH SECTOR

- **Community cleanup efforts**
- **Teaching Proper Hygiene**
- **Alert For Environmental Health Hazards**
- **Home Visits**
- **Fallow up care**



EXAMPLES OF RECOVERY ...

- Restore essential services
- Community rehabilitation
- Counseling
- Temporary housing
- Financial support or assistance
- Health and safety information
- Long-term medical care
- Physical restoration/re-construction
- Public information
- Conducting economic impact studies



EVALUATION

- Equipment Review
- Debriefing
- Review of Plans
- Documentation
- Education and Training
- Rehabilitation
- Restoration Function
- Safety Assessment
- Emotional Impact
- Recovery Process
- Research Opportunities



WHAT THE NURSES SHOULD KNOW



DISASTER

- *Natural disaster*
- *Drought and drought relief*
- *Air accidents*
- *Railway accident*
- *Chemical disasters*
- *Biological disasters*
- *Nuclear disaster*

NODAL MINISTRY

- *Ministry of home affair*
- *Ministry of agriculture*
- *Ministry of civil aviation*
- *Ministry of railways*
- *Ministry of environment and forests*
- *Ministry of health*
- *Dent. of atomic*



CORE COMPETENCIES IN DISASTER NURSING TRAINING

- Ethical and legal issues, and decision making;
- Care principles;
- Nursing care;
- Needs assessment and planning;
- Safety and security;
- Communication and interpersonal relationships;
- Public health; and
- Health care systems and policies in emergency situations

(WHO, 2008)



TOPICS THAT MUST BE COVERED BY DISASTER NURSING TRAINING

- Basic life support
- System and planning for settings where nurses work
- Communications (what to report and to whom)
- Working in the damaged facilities and with damaged equipment
- Safety of clients and practitioners
- Working within a team (understand each member's role and responsibility)
- Infection control
- Mental and psychosocial support

(WHO, 2006)





“Human history becomes more and more a race between education and catastrophe.”

HG Wells
The Outline of History, Ch 15



TAKE HOME MESSAGE



Nursing workforce are the integral part of disaster management team. They should work with confidence command , co –ordination and control with the effective use of communication skill in the affected community.





SALUTE
THE HEROS OF MUMBAI TERRORIST ATTACK



Thank You!

