

# TOT Module for Preparation and Implementation of Hospital Disaster Management Plan

## Focus on Emergency Health Services

Part II- Deliverable 12

Preparing Long Term Training and Capacity Building Strategy for  
Disaster Risk Reduction in India, under NCRMP



11 July 2014



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## Abbreviations and Acronyms

|        |                                                         |
|--------|---------------------------------------------------------|
| AIDS   | : Acquired Immunodeficiency Syndrome                    |
| CCMNC  | : Cabinet Committee on Management of Natural Calamities |
| CCS    | : Cabinet Committee on Security                         |
| CEO    | : Chief Executive Officer                               |
| CMOs   | : Chief Medical Officers                                |
| CCA    | : Climate Change Adaptation                             |
| CBDM   | : Community Based Disaster Management                   |
| CBDMP  | : Community Based Disaster Management Plan              |
| BDRM   | : Community Based Disaster Risk Management              |
| CBDRR  | : Community Based Disaster Risk Reduction               |
| CCU    | : Coronary Care Unit                                    |
| DM     | : Disaster Management                                   |
| DMD    | : Disaster Management Department                        |
| DRR    | : Disaster Risk Reduction                               |
| DDMA   | : District Disaster Management Authority                |
| DMHP   | : District Mental Health Programme                      |
| EPI    | : Expanded Programme on Immunisation                    |
| GOI    | : Government of India                                   |
| GP     | : Gram Panchayat                                        |
| HRVCA  | : Hazard Risk Vulnerability Capacity Assessment         |
| HVA    | : Hazard Vulnerability Analysis                         |
| HIV    | : Human Immunodeficiency Virus                          |
| ICS    | : Incident command system                               |
| IDSP   | : Integrated Disease Surveillance Project               |
| ICUs   | : Intensive Care Units                                  |
| KSA    | : Knowledge, Skills and Attitude                        |
| LCD    | : Liquid Crystal Display                                |
| MCI    | : Medical Council of India                              |
| MHA    | : Ministry of Home Affairs                              |
| NCMC   | : National Crisis Management Committee                  |
| NCRMP  | : National Cyclone Risk Mitigation Project              |
| NDMA   | : National Disaster Management Authority                |
| NDRF   | : National Disaster Response Force                      |
| NEC    | : National Executive Committee                          |
| NHP    | : National Health Policy                                |
| NIDM   | : National Institute of Disaster Management             |
| NMHP   | : National Mental Health Programme                      |
| NGOs   | : Non-Governmental Organisations                        |
| PPE    | : Personal Protective Equipment                         |
| PSSMHS | : Psycho-social Support and Mental Health Services      |
| Q&A    | : Question & Answer                                     |
| SDMA   | : State Disaster Management Authority                   |
| SFIT   | : Strategic Framework for Implementation of Training    |
| SAT    | : Systematic Approach to Training                       |
| TOT    | : Training of Trainers                                  |

TB : Tuberculosis  
VANE : Values, Attitudes, Needs and Expectations  
VANI : Values, Assumptions, Needs and Interests

## Introduction

This training module is developed as a tool to train master resource persons on preparation of hospital disaster management plans with a focus on provision of emergency health services.

India is the seventh largest country of the world with the total geographical area of 3,287,240 sq. km. (Census 2011). Such a large and diverse geo-climatic condition makes India highly vulnerable to different natural disasters. Out of 35 states/union territory, 22 are in the category of multi hazard prone states. India is highly vulnerable to earthquake, drought, flood, cyclone, landslide and avalanche. 68% of cultivable land mass is prone to drought, 60% is vulnerable to earthquake, 12% of the total area is prone to floods and 8% of the land is susceptible to cyclone. Changing climatic conditions, over exploitation of natural resources and unplanned urbanisation are adding on to the increasing frequency of natural disasters.

Total population of India is 1210 million (census 2011), which is the second largest in the world. A large population (more than 400 million) of poor with their multiple vulnerabilities accounts for India's third rank in terms of victims of natural disasters.

Hospitals constitute a part of critical lifeline infrastructure in the context of disasters. A safe and resilient hospital not only ensures an effective healthcare response during disasters but also ensures the safety of the patients already being treated in those hospitals before, during and after disasters.

This calls for high order of preparedness in the hospital in order to deal with disaster related emergencies with mass casualties and the resultant need for hospital space, staff and resources at various levels. Though as mandated by the DM Act 2005 every hospital is required to have an emergency plan in place but the past incidents like fire accidents in the AMRI hospital in 20011 raises a question on the effectiveness of the plan. The past experience also suggests that the plans available at the hospital are both not frequently updated and shared with the entire staff or/and there are no regular mock drills to carry out periodic preparedness checks or both. The field data collected during the study suggested that there has been no specific training given to the doctors or other staff who are supposed to prepare these safety plans.

The proposed training intervention seeks to create capacity at the level of hospital management to prepare and effectively implement the hospital disaster management plans.

The total number of government hospitals in the country is 11,614. To begin with, it is envisaged that 5 doctors from each government hospital would be a good number to train to begin with. The total number of personnel to be trained during the first five years would work out to be as follows:

### Universe to Be Addressed

| Category                                             | Numbers to be trained |
|------------------------------------------------------|-----------------------|
| Government hospitals' Doctors @ 5 from each hospital | 58,070                |
| Doctors attached to PHCs                             | 30,198                |
| <b>Total Doctors</b>                                 | <b>88,268</b>         |

Source: <http://nrhm.gov.in/>

## Entry Behaviour

Entry behaviour means assumed and actual entry behaviour. Though the assumed entry behaviour is the basis of the program design, there could be variations in actual entry behaviour which will be assessed at the beginning of each training program. This training program basically aims at training the doctors/CMOs who are in charge of hospital safety and are involved in the preparation of hospital disaster preparedness and management plan.

The TOT module has been designed in view of the envisaged role of resource persons which may not be reflected in their entry behaviour at the outset of the training.

## Aim

To facilitate the creation of requisite capacity within the hospital staff to prepare and effectively implement the hospital disaster management plan.

## About the training module

While the focus of training approach and methodology is on experiential methods, the module uses a combination of traditional learning methods, such as presentations and discussions, along with more participatory and experiential learning approaches, e.g. case study based group work and reflections on personal experience. Practical tools and frameworks are provided throughout. There are numerous references to other sources of relevant information.

A list of hand outs is given for each session as required and the list of sources and references is given at the end of the document. Key learning points for each session are suggested so as to help the facilitator sum up the learning at the end of each session. However, the key learning points can be revised and re-defined in view of emerging new knowledge, insights and perspectives.

As required, these messages can also be presented with the help of power point, cards or flip charts or made available to participants in the form of a handout.

This training module is designed for a five-day workshop in which three days are devoted to the sub-module on hospital disaster management planning and the remaining two days are designed to offer practical skills in design and delivery of training. Though the module is organised in a particular order, it is intended to be a flexible resource, in order to allow the trainers to decide how to use it according to the varying needs of each set of participants

and varying specific contexts. The sub-modules, learning units and sessions can be used in the order presented, on their own, or in combination with other individual sessions and learning units within sub-modules.

The material can be adapted by the facilitator to the specific context or needs of the participants. Different and more relevant case studies can be substituted. The way the sessions are eventually delivered may also depend on whether there is more than one facilitator, and if so, what expertise each brings to the training session. Estimated timings for sessions are offered, but these should be adapted to fit the time available and the group's level of experience and expertise.

PowerPoint presentations and hand outs are available as separate sections of the training module.

## Sub-Modules and Learning Units

The modular structure of the training module allows freedom and flexibility to its users by offering them an opportunity to make their independent choices for running both the base and training of trainer sub-modules either as one compact training event or as separate training events as required.

### Base Sub-Module on Health

The base sub- module on Health is divided into five learning units and fourteen sessions therein. The learning units are as follows:

#### ***Learning Unit 1: Disaster Management and Health – Key Issues and Challenges***

This learning unit aims at helping the participants examine the critical linkages between disasters and development in the context of climate change and its likely challenges for providing emergency health services to people hit by disasters and people from communities living with disaster and climate related risks.

Relationship between vulnerabilities and coping capacities will be underlined through strategic technical inputs followed by question and answer sessions. This learning unit will aim at highlighting the key issues and challenges related to provision of emergency health services in the event of disasters. This learning unit will try and trigger the participants to think through and find solutions in terms of what kind of disaster preparedness measures could possibly be required to address the identified issues and meet the related challenges.

#### ***Learning Unit 2: What constitutes hospital preparedness?***

This learning unit aims at helping the participants examine the basic constituents and components of hospital preparedness. As the majority of the participants are intended to be doctors in charge of government hospitals, most of the content for this learning is going to come from them. All the sessions in this learning unit will be conducted in a participatory fashion in the form of group work, case studies, open house discussion and question and answer sessions.

It is envisaged that participants would arrive at clarity regarding the specific constituents and components of hospital preparedness, particularly from the point of view of preparing hospital disaster management plan to offer emergency health services during and after disasters.

### ***Learning Unit 3: Preparation of hospital disaster management plan***

This learning unit basically aims at generating an informed understanding of the principles and process of hospital disaster management planning. This learning also looks at various phases and steps for planning. Various sessions in this learning unit employ participatory methods of learning, which take into account the experiences of the participants as major inputs for learning.

It will aim at a synthesis of all the learning generated in previous sessions. And therefore the group works involved in this session will draw majorly upon the insights and learning of the participants through the training so far.

### ***Learning Unit 4: Review and implementation of the hospital disaster management plan***

This learning unit aims at underlining the critical significance of periodic reviews to ensure effective implementation of hospital disaster management plans (HDMPs). Identification of specific medical emergencies due to disasters and the related challenges for provision of emergency health services in a particular context would need to be built both into the preparation and implementation of hospital disaster management plans (HDMPs).

A context specific assessment informing the preparation of HDMP will be the key to developing a sound review plan for effective implementation of HDMP. In order to ensure that the findings of this kind of assessment are collectively owned and used by all the hospital staff including doctors, nurses, paramedics etc., all of them would need to be actively engaged in a participatory assessment exercise.

### ***Learning Unit 5: Health information system: monitoring and evaluation***

This learning unit will aim at examining the role of health information system in monitoring and evaluation of preparation and implementation of hospital disaster management plans (HDMPs). This task will have the following sub-tasks:

- Examine the role of monitoring frameworks, indicators and arrangement for monitoring the process of the preparation and implementation of HDMPs
- Examine the role of evaluation in learning from the experience of preparing and implementing the HDMPs and improving the process over time.
- Prepare a road map for streamlining the health information system.

It is envisaged that at the end of this learning unit, the participants would be in a position to describe the ways in which they could streamline the health information systems in their respective districts and hospitals.

## **TOT Sub-Module**

### ***Learning Unit 6: Systematic Approach to Training (SAT)***

The objective of this learning unit is to equip the participants with basic knowledge about the key issues to be addressed in the course of designing a training intervention/programme.

### ***Learning Unit 7: Learning and Facilitation Skills***

The objective of this learning unit is to equip the participants with basic facilitation skills that help the trainers conduct training/learning sessions with efficiency and effectiveness.

## Training Schedule

| Day   | Overall Theme                                                                                                                                                                      | Specific Sessions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Day 1 | <b>Opening session</b><br><b>Learning Unit 1: Disaster management and health: key issues and challenges</b><br><br><b>Learning Unit 2: What constitutes hospital preparedness?</b> | <b>Morning</b><br>Opening session (60 min)<br>Session 1.1: Disaster management: key concepts of hazard, risk, vulnerability and capacity (75 minutes)<br>Session 1.2: Disaster management cycle and its various phases (45 minutes)<br>Session 1.3: DM Act and Policy: implications for the health sector (60 minutes)<br><br><b>Afternoon</b><br>Session 2.1: Roles and functions of hospitals in health emergencies (60 minutes)<br>Session 2.2: Constituents of hospital safety ( 90 minutes)<br><br>Evaluation of day (10 mins) |
| Day 2 | <b>Learning Unit 3: Preparation of hospital disaster management plan</b>                                                                                                           | <b>Morning</b><br>Recap of the previous day (10 min)<br>Session 3.1: Basic principles of hospital disaster management plan (60 minutes)<br>Session 3.2: Developing a hospital disaster management plan: key steps (90 minutes)<br><br><b>Afternoon</b><br>Session 3.3: Phasing of hospital disaster management plan (90 minutes)<br>Session 3.4: Pre disaster planning (90 minutes)<br><br>Evaluation of day (10 mins)                                                                                                              |
| Day 3 | <b>Learning Unit 4: Hospital disaster management plan: review and implementation</b><br><br><b>Learning Unit 5: Health information system: monitoring and evaluation</b>           | <b>Morning</b><br>Recap of the previous day (10 min)<br>Session 4.1: Effective hospital disaster management plan: key elements (90 minutes)<br><br>Session 4.2: Preparing checklist for hospital safety (90 minutes)<br><br><b>Afternoon</b><br>Session 4.3: Training of hospital staff and mock drills(90 minutes)<br><br>Session 5.1: Monitoring the implementation of hospital disaster management plan (90 minutes)                                                                                                             |

|       |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |                                                                                                                                         | <p>Session 5.2: Evaluation of the hospital disaster management plan (90 minutes)</p> <p>Evaluation of day (10 mins)</p>                                                                                                                                                                                                                                                                                                                                                                |
| Day 4 | <p><b>Learning Unit 6:<br/>Systematic Approach<br/>to Training (SAT)</b></p>                                                            | <p><b>Morning</b><br/>Recap of the previous day (10 minutes)<br/>Session 6.1: Systematic Approach to Training (SAT) and Assessing Training Needs (90 minutes)<br/>Session 6.2: Defining Training Aim and Objectives (90 minutes)</p> <p><b>Afternoon</b><br/>Session 6.3: Deciding the content, methodology, and resource persons (90 minutes)<br/>Session 6.4: Deciding the monitoring and evaluation indicators and processes (90 minutes)</p> <p>Evaluation of day (10 minutes)</p> |
| Day 5 | <p><b>Learning Unit 7:<br/>Learning and<br/>Facilitation Skills</b></p> <p><b>Monitoring and<br/>evaluation<br/>Wrap-up session</b></p> | <p><b>Morning</b><br/>Recap of the previous day (10 min)<br/>Session 7.1: Art of facilitation 1 (90 minutes)<br/>Session 7.2: Art of facilitation 2 (90 minutes)</p> <p><b>Afternoon</b><br/>Session 7.3: Sharing, Listening and Learning (60 minutes)<br/>Session 7.4: Learning to listen and listening to learn (60 minutes)<br/>Session 2: Workshop summary, next steps, evaluation, and closure (60 minutes)</p>                                                                   |

Facilitators might also like to consider adding in some time to the schedule for participants to read suggested resources or for free discussion.

## Guidance Note for trainers and facilitators

### Who can facilitate this workshop?

The facilitator will ideally have practical experience and a good conceptual understanding of disaster and climate change related medical emergencies and the resultant challenges for provision of emergency health services during and after disasters. One way to do this is to have two facilitators working together, one with experience of disaster management and climate change related medical and health emergencies and another with the requisite experience of facilitating disaster management planning exercises within institutions and

organisations. Facilitators need to be confident trainers, with a working knowledge of monitoring and evaluation practices. They need to have flexibility, willingness to learn, and passion for promoting learning.

### **Group size and composition**

The ideal group size for the workshop is 25, but it should not be more than 30 in any case. A gender balance among the participants is highly desirable. It is advisable to have at least equal number of women participants in the programme, if not more. As it is hard to achieve these numbers for a variety of reasons, it is important to initiate the process of seeking nominations fairly in advance.

### **What preparation is needed in advance?**

Both the facilitators and the participants need to be prepared in advance so as to ensure maximum learning from the TOTs.

#### **Participants:**

- a. **Criteria for Selection:** Participants of TOT are intended to be potential master trainers for this module. Criteria for selection of participants will include the following:
  - At least 10 years of demonstrated experience in the health sector in general and hospital management in particular.
  - Experience in provision of emergency health services.
  - Experience and interest in functioning as trainers; prior experience of attending training of trainer program such as DTS, DOT, MOT, TNA will preferred.
- b. **Required resources**

They need to be provided with a limited amount of relevant background reading in advance through e-mail. Ideally some reading should be suggested for each session, usually one or two documents. It is helpful if participants can read this in advance of the session, particularly if they are not familiar with the subject area.

#### **Facilitator/s:**

- a. **Facilitating Team:**

It is recommended that the TOT is facilitated by a team of two lead facilitators: one, an experienced trainer of at least 10 years of proven track record of training senior government officials; two, a health sector professional with first-hand experience of hospital management of at least 10 years
- b. **Other Resource Persons:**

Other resource persons(4-5) specialising in DRR and CCA issues, particularly with reference to their implications on the provision of emergency health services will have to be identified and taken on board in advance by NIDM and their partner agencies, if any.
- c. **Required resources:**

The lead facilitator/s will have to do their own background reading, and prepare the following:

*Two months before the workshop*

Decide on the criteria for selection of participants and the broad focus and objectives for the training and write to the concerned organisations and departments requesting them to nominate equal number of women and men participants as per the shared criteria for selection of participants for the programme.

#### *One month before the workshop*

Send nominated participants an outline of the workshop, including titles of learning units and sessions to be covered, and background reading to be done before the workshop. Ask the participants about their work experience, what they hope to gain from the workshop and any specific needs they may have (e.g. translation). This could be in the form of a simple questionnaire to check out the level of their knowledge and experience. The same questions could be used at the end of the course as part of the evaluation of the event. This could be formalised into a training needs assessment. Use this to guide your preparation of the workshop. Ensure that the training room is of sufficient size for the whole group and has suitable areas for small groups to work independently.

#### *One week before the workshop*

Review the completed questionnaires you have received back in order to understand the participants' profile in terms of their background, level of knowledge and their expectations from the workshop. Use this to guide your preparation. Prepare presentations, slides, hand-outs, a workshop timetable, flip charts, and lists of 'further resources' accordingly. Prepare a learning folder for each participant to hold all documents. At the start of the course this should contain the workshop agenda and timetable, any logistical information (accommodation, meals, transport, local maps), and a list of the names of all participants.

#### *Two days before the workshop*

Check to make sure that lighting, adaptors, extensions leads, plugs, as well as IT equipment are all working. Remember to test that you can open all the documents you will be using during the training, and that the equipment is compatible. If possible, use your own laptop and LCD projector.

### **What equipment will be needed?**

Given the participatory nature of the workshop, much of the workshop can be conducted using flip charts, markers, pens, sticky notes (post-its), sticky tack (blue tack), and meta/flash cards (sheets of coloured paper, about half the size of regular A4 printer paper). Laptop and data projector will be required to make PowerPoint presentations. Alternatively, PowerPoint slides can be printed on to acetates for use with an overhead projector, or as posters. Printer and photocopier would also be required.

### **How to use the technical notes?**

Technical notes are basically meant for the use of the trainers using this training module to train master resource persons. Technical notes carry some of the basic content that is proposed to be addressed in the concerned sessions. However, these would need to be suitably simplified and modified by the trained master resource persons for organising training of resource persons or direct training of district and sub-district level functionaries to be trained by the trained resource persons.

## Opening the workshop

As opening session is going to set the tone of the workshop to follow and has to be, therefore, planned and conducted carefully. The opening session should ideally be of 30-40 minutes, but certainly not more than one hour.

This session has to be used to share the purpose and objectives of the workshop, lay out the agenda, and set ground rules. It is also an opportunity for the participants to introduce themselves and their experience, explain their motivation for joining the workshop, and state their expectations from the event. You may want to use an 'ice-breaker' exercise like the one below to help participants to get to know each other, and to put them at ease and get them talking.

### Meeting and Knowing Each Other

Ask the participants to arrange themselves in two equal lines and facing each other. They will have a couple of minutes to introduce themselves to the person facing them and then provide their partner with some introductory information about themselves. Basic introduction may include the following:

Name

- Educational background
- Work experience
- Interests and pursuits

### Top tip

Monitor how many participants have managed to meet each other. Don't forget that in larger groups it may not be plausible for every person to meet, as this will take too much time. The other factor to consider when running this session with a large group is the noise level, and making yourself heard above the chatter.

### Expectations, hopes and fears

To encourage participants to think about what they expect, and to inform you, ask them what their expectations, hopes and fears are about the event.

Options include

- As they arrive, ask them to take Post-its or cards, write down their expectations, and stick them up on a wall or board.
- Have separate Post-its or cards for hopes and for fears
- Ask pairs or small groups to write expectations, or hopes and fears, on cards, one item to one card, which are then sorted on the ground, stuck up and displayed.
- Stick a large long sheet on the wall, with headings, columns and lines, for each person to fill in. The headings can be, for example, name, address and contact, and then any variety of details of expectations, hobbies and even personal symbols.

The expectations, hopes and fears can be addressed and commented on before starting. Pick the humorous ones to let everyone cheer up at the very outset. Avoid the ones that are likely to offend anyone individually or as a group.

## Concurrent and End-of-learning unit feedback from participants

Both concurrent and end-of-learning unit feedback are valuable for finding out how the event is unfolding and how it is being received by the participants. Concurrent feedback is feedback in real time. End-of-learning unit feedback offers a quick check on its perceived relevance, effectiveness and usefulness by the participants. It should be communicated to the participants at the very outset that their feedback is valued as it helps improve the delivery strategy of the learning units in future workshops and of the subsequent learning units in the same workshop.

Feedback received should be thoroughly reviewed and responded to. Facilitators can assess the strengths and weaknesses of the sessions and the process, and make adjustments accordingly. At the end of each day, spend at least ten minutes for feedback.

Suggested methods for concurrent and end-of-learning unit feedback are as follows:

1. One method for capturing feedback in real time is to create a space within the training space and call it 'Feedback and Reflections'. 'Post it' stick pads are made available on each table of the participants with the instructions that the participants are free to write out their comments and feedback on different sessions of the learning unit and stick it up on the 'Feedback and Reflections' as and when convenient during breaks. This will facilitate feedback and reflections by the participants in real time as per their convenience. Training facilitators should get the posted comments and feedback typed out on a daily basis for review, reflection and sharing with the participants as to how their comments and feedback are proposed to be addressed within the training programme.
2. Another method will be to administer an end-of-the-learning unit feedback form to be filled up by the participants at the end of each learning unit after all the sessions of that learning unit have been conducted. This will be a relatively more structured feedback and will seek to draw the feedback of the participants in the form of their responses to specific questions asked.

Both these methods together are likely to yield a very comprehensive feedback on the relevance, effectiveness and usefulness of different learning unit. These would be particularly helpful in sharpening the delivery strategy of these learning units in subsequent training programmes on the one hand and of subsequent learning units in the on-going training programme on the other.

For further reference a sample evaluation form for session and module is attached as annexure 1.

## Learning Unit 1: Disaster Management and Health: Key Issues and Challenges

### Objectives

The participants will be able to:

- Describe the key concepts in disaster management, particularly: hazard, risk, vulnerability and capacity
- Describe the disaster management cycle and its various phases
- Explain DM Act and Policy and its relevance to the provision of emergency health services

### Sessions

- Basic concepts of hazard, risk vulnerability and capacity
- Disaster management cycle: stages and issues
- DM Act and Policy with their specific relevance to the provision of emergency health services

**Estimated time:** 3 hours (180 minutes)

### Expected Outcome

Participants would have acquired an informed understanding of the key concepts of disaster management including hazard, risk, vulnerability, and capacity and will be able to identify the key issues and challenges in providing emergency health services.

## Session 1.1: Disaster management: key concepts of hazard, risk, vulnerability and capacity

**Duration:** 75 minutes

**Objective:** At the end of the session, the participants will be able to describe the key concepts of hazard, risk, vulnerability and capacity as used in the context of disaster management.

**Method(s):**

- Interactive lecture presentation
- Questions and Answers
- Group work

**Materials needed**

Markers, A4 size sheets and flip charts, handouts.

**Hand-outs**

Handout 1: Basic terms of disaster risk reduction (DRR), UNISDR (2009)

## Session Plan with Facilitator Notes

### Starting the Session (20 minutes)

Start with sharing the purpose of the session and its intended learning outcome. Do acknowledge at the very outset that some of the participants may already be well versed with the contents of the session and that you would like to involve them in the session as a contributor and resource person.

Follow this up with a little **brainstorming** on the key terms of the session. Write out the responses of the participants on a flip chart in the plenary with the help of a couple of volunteers for writing on the flip chart. Or alternatively give each participant a flash card and a felt pen to write out their responses and put it up on the wall on the space provided for the purpose. After everyone has put up her/his response, ask them to share it with the entire group.

### Interactive Lecture Presentation (ILP) (20 minutes)

This presentation has to be not more than 20 minutes and should explain all the key concepts related to disaster management and disaster risk reduction (DRR) with appropriate examples and illustrations. Hazard, vulnerability, capacity, and risk are the key concepts to be explained.

This presentation can be done using the power point, flip charts and flash cards as decided by the facilitator.

### Question & Answer and Discussion (20 minutes)

Presentation will be followed by a question and answer (Q&A) session. Q&A session will aim at encouraging the participants to raise questions and seek clarifications. A general discussion on the issues arising out of the Q&A session should follow and moderated by the facilitator to bring out the key learning points of the session. The session should end with the following two group exercises and a wrapping up by the facilitator.

### Group Work 1: Understanding Key Terms (15 minutes)

Divide the participants into groups of four or five. Distribute handout 1, flip chart paper to each group. Allow the participants for 10-15 minutes to reflect on the definitions and ask them to share one situation from their area as an example for each of the discussed concepts using the following matrix.

| Terminology             | Example |
|-------------------------|---------|
| Disaster                |         |
| Risk                    |         |
| Hazard                  |         |
| Capacity                |         |
| Vulnerability           |         |
| Disaster Risk Reduction |         |

## Technical Notes

### Key Concepts

**Disaster:** A disaster occurs when a natural event coincides with vulnerable human conditions and with insufficient capacities of the affected community to reduce the adverse impacts of the event. It is a sudden, calamitous event that disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources (IFRC 2013).

Disasters jeopardise development gains. Equally, development choices made by individuals, households, communities and governments increase or reduce the risk of disasters.

But disasters are not totally discrete events. With growing technology and scientific advances the possibility of occurrence, time, place and severity of the strike can be reasonably and in some cases accurately predicted.

**Hazard:** A dangerous phenomenon, substance, human activity, or condition that may cause loss of life, injury or other health impacts, damage to property, loss of livelihoods and services, social and economic disruption, or environmental damage. There are a number of different types of hazards, such as natural and human-induced hazards. It is important to differentiate between primary and secondary hazards. A secondary hazard would be the direct result of a primary hazard. For example, an earthquake can cause a landslide or tsunami.

Broadly hazards can be categorised as:

- **Natural hazards** are naturally occurring physical phenomena caused either by rapid or slow onset events which can be geophysical (earthquakes, landslides, tsunamis and volcanic activity), hydrological (avalanches and floods), climatological (extreme temperatures, drought and wildfires), meteorological (cyclones and storms/wave surges) or biological (disease epidemics and insect/animal plagues).
- **Technological or man-made hazards** (complex emergencies/conflicts, famine, displaced populations, industrial accidents and transport accidents) are events that are caused by humans and occur in or close to human settlements. This can include environmental degradation, pollution and accidents. Technological or man-made hazards (complex emergencies/conflicts, famine, displaced populations, industrial accidents and transport accidents)

**Vulnerability:** The characteristics and circumstances of a person, community, system, or asset that make it susceptible to the damaging effects of a hazard. There are many aspects of vulnerability, arising from various physical, social, economic, political, and environmental factors. Vulnerability varies significantly within a community and over time. Vulnerability is a condition that makes a community weak and susceptible to the impacts of a hazard.

To determine people's vulnerability, two questions need to be asked:

- To what threat or hazard are they vulnerable?
- What makes them vulnerable to that threat or hazard?

People (living conditions, health, security), Property (physical property loss, services), Economy (Loss of production & product, income) and Environment (water, air, soil or vegetation) etc. are the mentionable characteristics of "Tangible Vulnerability", because all of these can be determined easily.

On the other hand, Social Structure (family & community relationship), Cultural Practices (religious or agricultural activities), Motivation (govt. response) and Cohesion (interruption of normal life) are the major characteristics of "Intangible Vulnerability", because these are a bit difficult to determine.

Some of the major contributing factors are:

- Population Growth
- Rapid Urbanisation
- Environmental Degradation
- Lack of Awareness & Information
- Political Instability

**Capacity:** Capacity is also often termed as a reverse phenomenon of vulnerability. It is defined as the combination of all the strengths, attributes, and resources available within a community, society, or organisation that can be used to achieve agreed goals.

What capabilities do people have in lessening the impact of, preparing for, responding to, and recovering from disasters? What resources do they have access to and control over, so that they can effectively protect themselves from the impact of a disaster?

**Risk:** The combination of the probability of an event and its negative consequences often referred to by the following function:

$$\text{Disaster risk} = (\text{Hazard} \times \text{Vulnerability}) / \text{Capacity}$$

**Disaster Risk Reduction:** The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, decreased vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

## Session 1.2: Disaster management cycle and its various phases

**Duration:** 45 minutes

**Objective:** At the end of the session the participants will be able to explain the different phases of the disaster management cycle with specific references to provision of emergency health services.

**Methods**

- Interactive lecture presentation
- Group work
- Discussion

**Materials Needed**

Flipcharts, markers

## Session Plan with Facilitator Notes

### Starting the session (5 min)

Share the purpose and intended learning outcome of the session, which is to help the participants appreciate the different phases of disaster management cycle. This session intends to build this understanding that different phases of the disaster management cycle (response, recovery, mitigation and preparedness) have different planning requirements in general and from the point of view of preparation of a hospital disaster management plan in particular.

### Interactive Lecture Presentation (10 min)

This part of the session will aim at explaining the different phases of disaster management cycle by drawing on real life examples from some recent disasters such as Uttarakhand disaster of June 2013 and Phailin cyclone in Odisha and Andhra Pradesh in November 2013 in India.

People at risk are an inherently diverse group involving women, men and children on the one hand and old, sick and the challenged on the other. Hence, issues of gender, equity, inclusion and participation, which vary across different community contexts and different phases of the disaster management cycle. It is important to consider these issues during the course of a disaster management planning exercise.

The interactive lecture presentation will also highlight the role of climate change in creating complex conditions having far reaching consequences for people's lives in general and health in particular. Available data suggests that around 80% of all the so-called natural disasters comprise of cyclones, floods, and drought, which are all hydro-meteorological in nature and are believed to be related to impact of climate change in various ways. Post-disaster disease outbreaks can cause a major health emergency that need to be effectively addressed during the DM planning exercise.

Climate change introduces the elements of uncertainty and unpredictability in the occurrence of these disastrous events, particularly health emergencies. Cloud bursts resulting in flash floods leading to massive landslides and widespread destruction of infrastructure, assets, resources and loss of lives and livelihoods in Uttarakhand in June 2013 underline the complexity of the relationship between climate change and disaster risks that the communities at risk face across many states in India.

All these considerations will inform the exposition of the different phases of the disaster management cycle during this interactive lecture presentation made using a conversational style inviting questions and comments from the participants during the course of the presentation itself.

### Group Work 2: Understanding Disaster Management Cycle (15 minutes)

Part 1: Ask the participants to discuss different phases of the disaster management cycle.

Part 2: After this exercise is completed ask them to identify the health implications in various phases of disaster management cycle.

They should try and form consensus within the group and fill the following matrix.

| Activity                  | Phase | Health implication for affected population |
|---------------------------|-------|--------------------------------------------|
| Response (search, rescue) |       |                                            |
| Recovery                  |       |                                            |
| Mitigation/prevention     |       |                                            |
| Preparedness              |       |                                            |

Ask the different working groups to make their respective presentations. Group presentations will be followed by a **discussion in the plenary (10 minutes)**

**Summarise the key learning points** from the session by pulling together all the points made by different groups. **(5 minutes)**

## Technical Notes

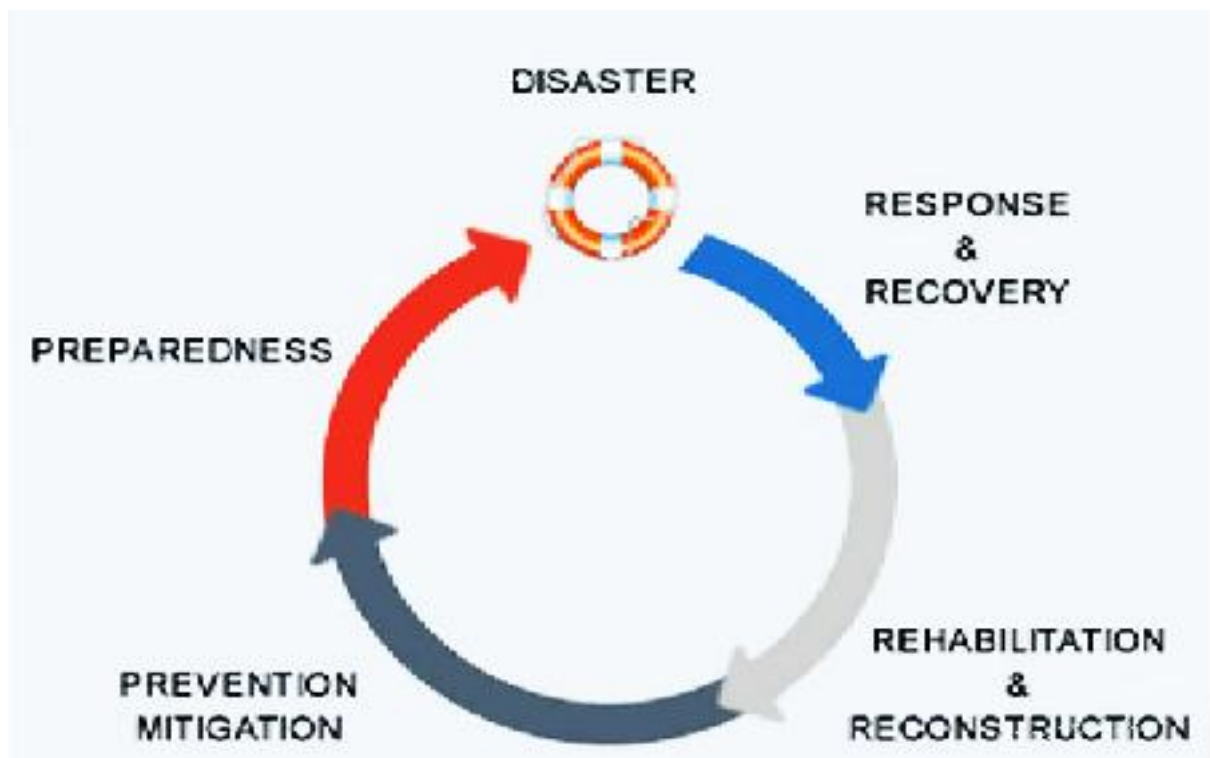
### Phases of Disaster Management:

Disaster management has four distinct, but inter-related phases. These are:

- Prevention and mitigation phase (pre-disaster)
- Preparedness phase (pre-disaster)
- Response and recovery phase (during and post disaster)
- Rehabilitation and reconstruction phase (post-disaster)

In each of these phases various activities take place which are shown in Figure 1.

**Figure 1: Disaster Management Cycle**



Source: [www.nidm.gov.in](http://www.nidm.gov.in)

- Before a disaster (pre-disaster). Pre-disaster activities are those which are undertaken to reduce human and property losses caused by a potential hazard: for example, carrying out awareness campaigns, strengthening the existing weak structures, preparation of the disaster management plans at household and community level, etc. Such risk reduction measures taken at this stage are termed as mitigation and preparedness activities.
- During a disaster (disaster occurrence). These include initiatives taken to ensure that the needs and provisions of victims are met and suffering is minimised. Activities taken at this stage are called emergency response activities.
- After a disaster (post-disaster). There are initiatives taken in response to a disaster with a purpose to achieve early recovery and rehabilitation of affected communities, immediately after a disaster strikes. These are called response and recovery activities.

The process from response to long term recovery and reconstruction is cyclical in nature. To begin with, if long term recovery is not planned keeping in the mind the principle of “build back better” it can again lead to avoidable disasters. Each phase in the cycle has a bearing on the following phase. For example, the preparedness of the event will determine the scale and effectiveness of the response operation. In a situation where people, systems and institutions are well prepared, it will reduce the damage and loss of lives, livelihoods, infrastructure and property due to disasters. This will accordingly impact on the subsequent phases of the disaster management cycle.

The key to effective disaster management in general and disaster risk reduction (DRR) in particular lies within the interrelationships across different phases of the DM cycle. Hence, focus only on one phase to the exclusion of others is not going to work. Preparedness phase activities, which are undertaken before a disaster strike, aims at building the capacities of all the stakeholders, particularly the communities at risk, for reducing their vulnerabilities and enhancing their coping capacities to deal with disasters effectively. It may not be possible to have a level of preparedness where no occurrence of a hazardous event results into any kind of damage or loss. But it is certainly possible to have a level of preparedness that results into minimum possible damage and loss in the event of a disaster and enables the communities at risk to be resilient enough to bounce back into normalcy on their own.

Similarly, recovery, rehabilitation and reconstruction phases offer a huge opportunity to engage in long term inclusive, resilient and sustainable development planning and administration at the local level.

Some of the key terms discussed in this diagram are defined below:

- Preparedness aims to reduce to the minimum level possible, the loss of human lives and damage to build and natural infrastructure through the prompt and efficient actions to response and rehabilitation. Effective preparedness allows communities and institutions to provide a quick, organised response to disasters and include early warning systems, planned evacuation routes and sites etc.
- Disaster prevention expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance. Examples include dams or embankments that eliminate flood risks, land-use regulations that do not permit any settlement in high risk zones, and seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake. It is however not always possible to prevent a hazard event from taking place, in this case the task transforms to that of mitigation which aims to minimise the hazard impact. (UNISDR, 2009)
- Mitigation is the lessening or limitation of the adverse impacts of hazards and related disasters. The adverse impacts of hazards often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. Mitigation measures encompass engineering techniques and hazard-resistant construction as well as improved environmental policies and public awareness. It should be noted that in climate change policy, “mitigation” is defined differently, being the term used for the reduction of greenhouse gas emissions that are the source of climate change. (UNISDR, 2009)
- Response: The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure

public safety and meet the basic subsistence needs of the people affected”  
(UNISDR,2009)

- Recovery is the activity that returns humans and built infrastructures to minimum living/operating standards and guides long-term efforts designed to return life to normal levels after a disaster. This includes building temporary housing and provision of basic household amenities.

#### **Key Learning Points**

- Response/recovery, rehabilitation/reconstruction, prevention/mitigation and preparedness are the four major stages/phases of the disaster management cycle.
- These stages and phases are inter-related and have considerable bearing on each other’s activities and outcomes: for example, recovery phase offers a big opportunity to build in mitigation measures feeding into rebuilding and reconstruction programs in the subsequent phase.

## Session 1.3: DM Act and Policy: implications for the health sector

**Duration:** 60 minutes

**Objective:** At the end of the session, the participants will be able to list different provisions of the DM Act and Policy that have specific relevance to the health sector.

**Methods**

- Interactive lecture presentation
- Discussion

**Materials Needed**

Flipcharts, markers

## **Session Plan with Facilitator Notes**

### **Starting the Session (5 minutes)**

Explain the purpose of the session and its intended learning outcome, which is to help the participants have an informed understanding of the key provisions of the Disaster Management Act, Government of India 2005 and National Policy on Disaster Management 2009 with a focus on their implications for the health sector.

### **Interactive Lecture Presentation (25 minutes)**

This will be a brief presentation of about 20 minutes and could be made using either the power point or flip charts. This will give an overview of the overall context within which a legislative framework followed with a national policy on disaster management has been developed in India.

Act will be presented first followed by the Policy. Highlight the sections and portions that have implications for designing and delivering emergency health services during disasters and climate related emergencies.

### **Discussion (25 minutes)**

The interactive lecture presentation will be followed by an open house discussion in the plenary. Encourage participants to ask questions, seek clarifications and make comments. The facilitator will gradually steer the discussion towards the implications of the Act and Policy for planning about the provision of emergency health services in times of disaster and climate related crisis.

Summarise the key learning points from the session. **(5 minutes)**

## Technical Notes

### Disaster Management Framework<sup>1</sup>

The institutional and policy mechanisms for carrying out response, relief and rehabilitation after disasters in India had been well-established since Independence. However, following mega disasters such as Orissa Super Cyclone of 1999, Bhuj Earthquake of 2001 and Asian Tsunami of 2004, disaster management came to assume enhanced policy priority and focus. A shift in approach from a response and relief oriented reactive mode to mitigation and preparedness focussed proactive mode to disaster management marked a paradigm shift in public policy.

The Tenth Five-Year Plan (2007-12) also articulated this significant policy shift. The Plan stated that: 'The traditional perception relating to the management and mitigation of natural disasters has been limited to the idea of "calamity relief," which is seen essentially as a non-plan item of expenditure. However, the impact of major disasters cannot be mitigated by the provision of immediate relief alone, which is the primary focus of calamity relief efforts. Disasters can have devastating effects on the economy; they cause huge human and economic losses, and can significantly set back development efforts of a region or a State. With the kind of economic losses and developmental setbacks that the country has been suffering year after year, the development process needs to be sensitive towards disaster prevention and mitigation aspects. There is thus a need to look at disasters from a development perspective as well.'

**The Plan also laid down a blue-print for the future:** The future blue-print for disaster management in India rests on the premise that in today's society while hazards, both natural or otherwise, are inevitable, the disasters that follow need not be so and the society can be prepared to cope with them effectively whenever they occur. The need of the hour is to chalk out a multi-pronged strategy for total risk management, comprising prevention, preparedness, response and recovery on the one hand, and initiate development efforts aimed towards risk reduction and mitigation, on the other. Only then can we look forward to 'sustainable development'.

In view of this, a holistic **National Disaster Management Framework** was developed in 2004, which highlights the interdependence of economy, environment, and development. This framework also links the issues of poverty alleviation, capacity building, community empowerment and other structural and non-structural issues of prevention and preparedness, response and recovery for effective disaster risk mitigation and management. A comprehensive legal and institutional framework for disaster management has been set up through the **Disaster Management Act** passed by the Indian Parliament in 2005 and the **National Policy on Disaster Management** that was approved in 2009.

### DM Act, 2005

The Disaster Management Act 2005 has provided the legal and institutional framework for disaster management in India at the national, state and district levels. In the federal polity of India the primary responsibility of disaster management vests with the State Governments. The Central Government lays down policies and guidelines and provides technical, financial

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<sup>1</sup> <http://www.simplydecoded.com/2013/10/21/india-disaster-profile-and-management/>

and logistic support while the district administration carries out most of the operations in collaboration with central and state level agencies.

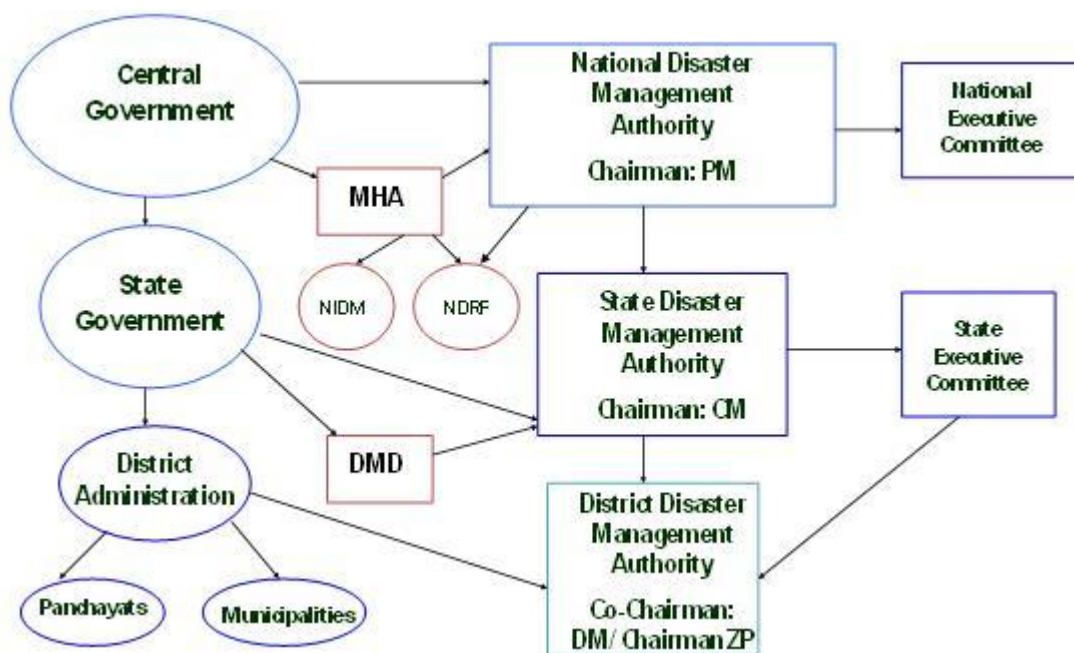
In the Central Government there are existing institutions and mechanisms for disaster management while new dedicated institutions have been created under the Disaster Management Act of 2005.

The Cabinet Committee on Management of Natural Calamities (CCMNC) oversees all aspects relating to the management of natural calamities including assessment of the situation and identification of measures and programmes considered necessary to reduce its impact, monitor and suggest long term measures for prevention of such calamities, formulate and recommend programmes for public awareness for building up society's resilience to them. The Cabinet Committee on Security. (CCS) deals with the matters relating to nuclear, biological and chemical emergencies

The National Crisis Management Committee (NCMC) under the Cabinet Secretary oversees the Command, Control and Coordination of the disaster response.

The Disaster Management Act, 2005 has created new institutions at the national, state, district and local levels. The new institutional framework for disaster management in the country is as shown in Figure 2:

**Figure 2: Institutional Framework for Disaster Management in India**



The National Disaster Management Authority (NDMA) under the Chairmanship of the Prime Minister is the apex body responsible for laying down policies, plans and guidelines for disaster management and for coordinating their enforcement and implementation throughout the country. The policies and guidelines will assist the Central Ministries, State Governments and district administration to formulate their respective plans and programmes. NDMA has the power to approve the National Plans and the Plans of the respective Ministries and Departments of Government of India. The general superintendence, direction and control of National Disaster Response Force (NDRF) are vested in and will be exercised by the NDMA.

The National Executive Committee (NEC) is mandated to assist the NDMA in the discharge of its functions and further ensure compliance of the directions issued by the Central Government. The NEC comprises of the Union Home Secretary as the Chairperson, and the Secretaries to the GOI in the Ministries/Departments of Agriculture, Atomic Energy, Defence, Drinking Water Supply, Environment and Forests, Finance (Expenditure), Health, Power, Rural Development, Science and Technology, Space, Telecommunications, Urban Development, Water Resources and the Chief of the Integrated Defence Staff of the Chiefs of Staff Committee as members. Secretaries in the Ministry of External Affairs, Earth Sciences, Human Resource Development, Mines, Shipping, Road Transport & Highways and Secretary, NDMA are special invitees to the meetings of the NEC. The National Executive Committee is responsible to prepare the National Plan and coordinate and monitor the implementation of the National Policy and the guidelines issued by NDMA.

The Ministry of Home Affairs (MHA) in the Central Government has the overall responsibility for disaster management in the country. For a few specific types of disasters the concerned Ministries have the nodal responsibilities for management of the disasters, as under:

**Table 1: Concerned Ministries for Specific Disasters**

| Sl. No. | Disaster                           | Disaster Management by | Nodal Ministry                                                     | Mitigation efforts<br>Member Ministries on<br>Mitigation Plan<br>Committee (MPC)                                                                                                                                                     |
|---------|------------------------------------|------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Earthquake                         | MHA                    | Ministry of Earth Sciences                                         | Ministries of Science and Technology,<br>Urban Development; Rural Development;<br>HRD; Health & Family Welfare;<br>Panchayati Raj; Youth Affairs & Sports;<br>Women & Child Development;<br>IT & Telecommunication; I & B; and Space |
| 2       | Flood                              | MHA                    | Ministry of Water Resources                                        | Space; Telecommunication                                                                                                                                                                                                             |
| 3       | Drought, Hailstorm and Pest Attack | A&C                    | Department of Agriculture and Cooperation, Ministry of Agriculture |                                                                                                                                                                                                                                      |
| 4       | Landslide                          | MHA                    | Ministry of Mines                                                  | Road Transport and Highways and Shipping                                                                                                                                                                                             |
| 5       | Avalanche                          | MHA                    | Ministry of Defence                                                | Road Transport and Highways and Shipping                                                                                                                                                                                             |
| 6       | Forest Fire                        | E&F                    | Ministry of Environment and Forests                                |                                                                                                                                                                                                                                      |

|    |                                   |        |                                                           |                                                                                                                                     |
|----|-----------------------------------|--------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 7  | Nuclear Disaster                  | MHA/AE | Department of Atomic Energy                               | Defence; Health and Family Welfare                                                                                                  |
| 8  | Industrial and Chemical Disasters | E&F    | Ministry of Environment and Forests                       |                                                                                                                                     |
| 9  | Biological Disaster               | H&FW   | Ministry of Health and Family Welfare                     | Defence, Environment and Forests, Agriculture and Co-operation, Animal Husbandry, Dairying & Fisheries; and Chemicals & Fertilisers |
| 10 | Rail Accidents                    | Rly    | Ministry of Railways                                      |                                                                                                                                     |
| 11 | Road Accidents                    | RTH&S  | Ministry of Road Transport and Highways and Shipping      |                                                                                                                                     |
| 12 | Aviation Accidents                | CA     | Ministry of Civil Aviation                                |                                                                                                                                     |
| 13 | Cyclone/ Tornado/ Hurricane       | MHA    | India Metrological Dept. Under Ministry of Earth Sciences |                                                                                                                                     |
| 14 | Tsunami                           | MHA    | Ministry of Earth Sciences                                |                                                                                                                                     |

Source: *Disaster Management in India, MHA, 2011*

The National Institute of Disaster Management (NIDM) has the mandate for human resource development and capacity building for disaster management within the broad policies and guidelines laid down by the NDMA. NIDM is required to design, develop and implement training programmes, undertake research, formulate and implement a comprehensive human resource development plan, provide assistance in national policy formulation, assist other research and training institutes, state governments and other organizations for successfully discharging their responsibilities, develop educational materials for dissemination and promote awareness among stakeholders in addition to undertake any other function as assigned to it by the Central Government

The National Disaster Response Force (NDRF) is the specialised force for disaster response which works under the overall supervision and control of the NDMA.

At the State Level the State Disaster Management Authority (SDMA), headed by the Chief Minister, lays down policies and plans for disaster management in the State. It is also responsible to coordinate the implementation of the State Plan, recommend provision of funds for mitigation and preparedness measures and review the developmental plans of the different departments of the State to ensure integration of prevention, preparedness and mitigation measures.

The State Disaster Management Department (DMD) which is mostly positioned in the revenue and relief department is the nodal authority for disaster management at the state level. At the district level the District Disaster Management Authority (DDMA) is headed by

the District Magistrate, with the elected representative of the local authority as the Co-Chairperson. DDMA is the planning, coordinating and implementing body for disaster management at district level. It will, inter alia prepare the District Disaster Management Plan and monitor the implementation of the National and State Policies and the National, State and the District Plans. DDMA will also ensure that the guidelines for prevention, mitigation, preparedness and response measures laid down by the NDMA and the SDMA are followed by all departments of the State Government at the district level and the local authorities in the district.

Under Section 6 of the Disaster Management Act, (2005), the National Disaster Management Authority (NDMA) is, inter alia, mandated to issue Guidelines for preparing action plans for holistic and coordinated management of all disasters. Formulation of these guidelines has involved active participation and contribution of stakeholders that include ministries, departments, institutions, experts. Besides this NDMA is presently responsible for conceptualising and implementing preparedness, mitigation, community preparedness, and public awareness activities besides also helping in recovery. In this direction disaster medicine has been accorded a high priority and the following guidelines have already been released related to health:

**1. Guidelines on Medical Preparedness and Mass Casualty Management (2007)** focus on medical preparedness for capacity building at various levels, specialised health care and laboratory facilities with the response focus on pre hospital care and transportation of the casualties and their management in hospitals. An all hazard approach has been adopted and special emphasis has been given for the management of chemical, biological, radiological and nuclear (CBRN) casualties.

**2. Guidelines on Chemical (Industrial) Disasters (2007)** focus on management of industrial disasters in chemical industries. The guidelines stress on preparedness for fail free safety and security issues, preparation of on-site and off-site plans. A coordinated response mechanism between on- site and off-site managers including the management of casualties arising out of chemical industrial disasters is required to be put in place.

**3. Guidelines on management of Biological disasters (2008)** including bio terrorism deals with the prevention, preparedness, management of major epidemics and pandemics and those occurred by terrorist activities in the form of bio terrorism by the use of biological agents. Special stress is laid on prevention by strengthening Integrated Disease Surveillance Project (IDSP), immunisation programmes, and preparedness by upgrading and creating bio-safety laboratories across the country. A chapter is also dedicated to agro terrorism.

**4. Guidelines on management of Chemical (Terrorism) disasters (2009)** deals with prevention, preparedness including capacity development and infrastructure required thereof. Stress has been laid on strengthening, creation of national and zonal poison information centres, personal protective equipment (PPE), decontamination facilities, availability of antidotes, specialised ambulance for evacuation and management of casualties in earmarked hospitals.

**5. The Guidelines on Psycho-social Support and Mental Health Services (PSSMHS)** stress on the comprehensive interventions aimed at addressing wide range of psychosocial and mental health problems arising out of disasters. These interventions consist of psycho-social first aid in the immediate response phase followed by psycho-social support. A well-orchestrated referral mechanism for continued support and management has been emphasised. Participation of community level workers, non-government organisation (NGOs) and role of government agencies has been highlighted. Special attention has been paid to the vulnerable groups of the community. Under the umbrella of National Health Policy (NHP), National Mental Health Programme (NMHP) and District Mental Health Programme (DMHP) the PSSMHS shall be delivered in an integrated manner as a part of general health care and general relief in disasters.

## Learning Unit 2: What constitutes hospital preparedness?

### Objective(s)

- Analyse the crucial role of hospitals in emergencies.
- Spell out the various constituents of hospitals safety and preparedness
- Examine the significance of a hospital disaster management plan

### Sessions

- Roles and functions of hospitals in health emergencies
- Constituents of hospital safety

**Estimated time:** 150 minutes (2.5 hours)

### Expected Outcome

Participants would be able to explain the roles and functions of hospitals in health emergencies and different constituents and components of hospital preparedness.

## Session 2.1: Roles and functions of hospitals in health emergencies

**Duration:** 60 minutes

**Objective:** At the end of the session, the participants will be able to describe the roles and functions of hospitals in health emergencies.

**Methods:**

- Group work
- Interactive lecture presentation

**Materials needed**

Flip charts, markers, hand-out

**Handouts**

Handout 2: Case Study: Awareness triggers action at a major public hospital (Not to be necessarily used during the session but to be provided as a background reading a day before to help the participants reflect on their own experience in terms of roles and functions of hospitals in health emergencies)

## Session Plan

### Starting the session (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes.

### Group Work 3: Role of hospitals in provision of emergency health services (40 minutes)

This group work is designed to assess and mark the entry behaviour of participants in terms of their understanding of the roles and functions of hospitals in the provision of emergency health services during and after disasters, besides starting a process of brainstorming and reflection on the issue.

Divide the participants into groups of four or five. Ask them to list out all the specific roles and functions of hospitals in the provision of emergency health services. Working groups have to discuss and fill the following matrix.

| Roles and functions of hospitals in provision of emergency health services |           |                    |
|----------------------------------------------------------------------------|-----------|--------------------|
| Roles                                                                      | Functions | Resources required |
| 1.                                                                         |           |                    |
| 2.                                                                         |           |                    |
| 3.                                                                         |           |                    |
| 4.                                                                         |           |                    |

After the group work is completed, all the working groups should be given around 5 minutes each to make their respective presentations. After all the presentations are made, invite questions on the presentations made, if any.

### Interactive Lecture Presentation (15 minutes)

The facilitator should end the session with a brief interactive lecture presentation spelling out the roles and functions of hospitals in provision of emergency health services. The key learning points from the group work earlier during the sessions should also be summarised as a part of this presentation.

## Technical Notes

The effects of various disasters on health depend on the type of disaster and the time of its onset. Sudden onset disasters such as earthquakes pose greater threats to health than slow onset disasters. The actual and potential health problems resulting from the disaster are multifaceted and do not all occur at the same time. The resulting health problems might be related to food and nutrition, water and sanitation, mental health, climatic exposure and shelter, communicable diseases, health infrastructure and population displacement.

Disasters, whether natural or human-made, create particular problems for health services. Damage to health infrastructure can be summarised as follows:

- Disasters can cause serious damage to health facilities, water supplies and sewage systems. The damage can severely limit health systems' provision of medical care to the population in the time of the greatest immediate need. Structural damage to facilities poses a risk for both health care workers and patients.
- The supply chain (medical equipment and pharmaceutical supplies) for the health facilities is often temporarily disrupted.
- Limited road access makes it difficult for disaster victims to reach health care centres. Relief organisations might also have difficulties reaching vulnerable population.
- Pre-hospital coordination and communication is crucial in emergency situations. Disrupted communication systems lead to a poor understanding of the actual capacity of various receiving facilities, military resources and relief organisations. Consequently, the already limited resources are not effectively utilised to meet the demands.
- Increased demands for medical attention:
  - Climatic exposure because of rain or cold weather puts a particular strain on the health system;
  - Inadequacy of food and nutrition exposes the population to malnutrition, particularly in the vulnerable groups such as children and the elderly; and
  - If there is a mass casualty incident, health systems can be quickly overwhelmed and left unable to cope with the excessive demands.
- Population displacement:
  - A mass exodus from the emergency site places additional stress and demands on the hospitals including staff, facilities and health services.
  - Depending on the size of the migrant population, the host facilities may not be able to cope with the new burden, and
  - Mass migration can introduce new diseases into the host community.
- Major outbreaks of communicable diseases:
  - While natural disasters do not always lead to massive infectious disease outbreaks, they do increase the risk of disease transmission. The disruption of sanitation services and the failure to restore public health programmes combined with the population density and displacement, all culminate in an increased risk for disease outbreaks.
  - The incidence of endemic vector-borne diseases may increase due to poor sanitation and the disruption of vector control activities.

## Role of emergency health services in disasters<sup>2</sup>

Disasters, depending on their type and magnitude, result in various levels of morbidity and mortality. Except earthquakes that produce special demands, the number of disaster victims requiring medical care is usually low. The demand for curative care is highest during the acute emergency stage, when the affected population is most vulnerable to the new environment and before basic public health measures such as water, sanitation and shelter have been implemented. Afterwards, the priority should shift to preventive measures that can improve the overall health of the displaced population dramatically.

Disasters call for a coordinated response between curative and preventive health services, including food supply, water and sanitation. To minimise mortality and morbidity, it is also necessary to organise the response and relief according to three levels of preventive health measures:

**Primary prevention** is the ultimate goal of preventive health care. It aims to prevent the transmission of disease to generally healthy populations by using the following actions:

- Promoting healthy practices;
- Implementing public health measures that reduce a population's exposure to risk factors such as ensuring a safe drinking water supply to prevent diarrhoea, an adequate food supply to minimise malnutrition and distributing mosquito nets to prevent malaria; and
- Conducting medical interventions such as chemo-prophylactics against malaria and measles immunisation.

**Secondary prevention** identifies and treats as early as possible diseased people to prevent the infection from progressing to a more serious complication or death. This is done using the following:

- Alleviating symptoms of diseases such as giving Oral Rehydration Solution early to a child with diarrhoea to prevent dehydration and possible death; and
- Curing patients with diseases through early detection and treatment of TB, dysentery, etc.

**Tertiary prevention** reduces permanent damage from disease such as a patient being offered rehabilitative services to lower the effects of paralysis due to polio or land mine injuries.

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<sup>2</sup> The Johns Hopkins and the International Federation of Red Cross and Red Crescent Societies

## Session 2.2: Constituents of hospital safety

**Duration:** 90 minutes

**Objectives:** At the end of the session, the participants will be able to spell out the various constituents and components of hospital safety from an emergency management perspective.

**Methods:**

- Group Presentations and discussion in the plenary
- Summarise the key learning
- Group Work

**Materials needed**

Flip charts, markers, handouts

**Handouts**

Handout 3: Case Study: Mexico: How safe is your health facility? The “Hospital Safety Index.”

Handout 4: 10 basic facts to know about keeping hospitals and health facilities safe from disasters.

## **Session Plan with Facilitator Notes**

### **Starting the Session (5 minutes)**

Explain the purpose and process of the session and its intended learning outcome/s.

### **Group Work 4 (40 minutes)**

The primary method for this session will be group work. Divide the participants into 4-5 groups and ask them to work on identifying and articulating the various constituents and components of hospital safety.

### **Group Presentations and discussion in the plenary (40 minutes)**

Ask the working groups to make their respective presentations. After all the presentations are made, throw the floor open for questions and answers followed by discussion in the plenary.

### **Summarise the key learning (5 minutes)**

Summarise the key learning from the session and fill the gaps in learning through a power point or flip chart based presentation. Address all the concerns and confusions arising out of the discussions and deliberations held earlier during the session.

## Technical Notes

Safe hospitals are health facilities whose services remain accessible and functioning, at maximum capacity and within the same infrastructure, during and immediately following disasters, emergencies or crises.

### ***A safe hospital . . .***

...will not collapse in disasters, killing patients and staff

...will be able to continue to function and provide critical services in emergencies

...will be organised, with contingency plans in place and health personnel trained to keep the network operational

Supporting safe hospitals involves knowledge of many factors that contribute to their vulnerability, which includes:

- Buildings: The location and design specifications and the resiliency of the materials used contribute to the ability of hospitals to withstand adverse natural events.
- Patients: A disaster will inevitably increase the number of potential patients.
- Hospital beds: In the aftermath of a disaster, the availability of hospital beds frequently decreases even as the demand for emergency care increases.
- Medical and support staff: The loss or unavailability of personnel disrupts the care of the injured; hiring outside personnel to sustain the response capacity adds to the overall economic burden.
- Equipment and facilities: Damage to non-structural elements can sometimes surpass the cost of the structure itself. Even when the damage is less costly, it can still force the hospital to halt operations.
- Basic lifelines and services: A hospital's ability to function relies on lifelines and other basic services such as electrical power, water and sanitation, and waste treatment and disposal. When some services are affected, the performance of the entire hospital suffers.

Supporting safe hospitals entails vision and commitment to ensure that they are fully functional especially in times of emergencies and disasters. There should be involvement of various sectors such as: planning, finance, public services, architecture and engineering.

Protecting health facilities includes:

- Ensuring risk reduction in the design and construction of all new health facilities.
- Improving the non-structural and functional vulnerability of existing health facilities.
- Adopting legislative and financial measures to select and retrofit the most critical facilities to increase levels of protection.

## Learning Unit 3: Preparation of hospital disaster management plan

### Objective(s)

- Identify the aim, objectives and basic principles of a hospital disaster management plan.
- Describe the process of generating a hospital disaster management plan

### Sessions

- Basic principles of hospital disaster management plan
- Developing a hospital disaster management plan: key steps
- Phasing of hospital disaster management plan
- Pre disaster planning

**Estimated time:** 330 minutes (5.5 hours)

### Expected Outcome

Participants would have acquired an informed understanding of the basic principles, steps, phases and process of preparation of a hospital disaster management plan (HDMP).

## Session 3.1: Basic principles of hospital disaster management plan

**Duration:** 60 minutes

**Objective:** At the end of the programme, the participants would be able to delineate the basic principles of hospital disaster management plan.

**Methods:**

- Brainstorming
- Wrap-up presentation

**Materials needed:**

Flip charts, markers

## **Session Plan with Facilitator Notes**

### **Starting the session (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Brainstorming (50 minutes)**

Start with a brainstorming on the basic principles of hospital disaster management plan. Encourage the participants to critically think through their work experience, particularly related to the provisions of emergency health services, if any and try and cull out the basic principles of hospital disaster management plan.

Record all the responses from the participants on a white board or flip chart with the help from the volunteers from among the participants. After all the responses are listed, get them organised in some broad categories through a consultative process

### **Wrap-up Presentation (5 minutes)**

Close the session with a brief wrap-up presentation summarising all the key learning points generated during the brainstorming session and putting it in the larger perspective of globally agreed principles of hospital disaster management plan. (5 minutes)

## Technical Notes

A hospital disaster management initiative provides the opportunity to plan, prepare and enable an effective response in case of disasters/ mass casualty incidents (MCI). Disasters and mass casualties can cause great confusion and inefficiency in the hospitals and put a lot of pressure on its existing facilities and services. They can overwhelm the hospitals resources, staffs, space and or supplies. Lack of any tangible plan to fall back upon in times of disaster leads to a situation where there are many sources of command, many leaders, and no concerted effort to solve the problem. Everyone may end up doing his/ her own work without effectively contributing to solving the larger problem of the hospital.

A sound hospital disaster management planning seeks to ensure that even during a sudden mass casualty incident, the hospital is actually running on full capacity. This is to ensure that even with the greater number of patients coming in within a short span of time does not result in any compromise on the quality of medical care and more people survive and are nursed back to health. Quality of care to the serious / critical patients is not compromised at any cost.

The plan should aim at:

- Survival and recuperation of as many patients as possible
- Proportional distribution of patients to other health care facilities
- Full time emergency services on a 24 hour per day, 7 days a week basis with the standard requirements of receiving mass casualty incident patients at all times
- Sufficient number of personnel, including doctors and paramedical staff to meet the patient needs for emergency care.
- Appropriate services as per patients' needs.
- Emergency services are integrated with other departments of the hospital such as pathology and others.
- Coordinated functioning of all the departments for provision of emergency health services.

Chaos cannot be prevented during the first few minutes of a major accident or disaster. But the primary aim of hospital disaster management plans should be to keep this time as short as possible. Some of the basic principles while formulating a hospital disaster emergency plan are as follows:

- **Predictable:** the hospital disaster plan should have a predictable chain of management; plan should have organisational charts with roles and responsibilities of different departments clearly defined and presented.
- **Simple:** the plan should be simple and operationally functional.
- **Flexible:** the plan should be flexible enough to accommodate and adapt to unforeseen situations during disasters.
- **Concise:** the plan should be concise in its delineation of specific roles, responsibilities of different actors and work relationships of administrative and technical groups.
- **Comprehensive:** it should be comprehensive enough to look at the network of various other health care facilities along with formulation of an inter-hospital transfer policy in the event of a disaster.

- **Adaptable:** although the disaster plan is intended to provide standard procedures which may be followed with little thought, it is not complete if there is no space for adaptability.
- **Anticipatory:** all hospital plans should be made considering the worst case scenarios.
- **Part of a Regional Health Plan in Disasters:** A hospital cannot be a lone entity making its plans in isolation; the hospital plans have to be integrated with the regional plan for proper implementation.

## Session 3.2: Developing a hospital disaster management plan: key steps

**Duration:** 90 minutes

**Objectives:** At the end of the session, the participants will be able to determine the steps involved in the process of developing a hospital disaster management plan.

**Method:**

- Group work and presentation
- Discussion in the plenary
- Concluding remarks

**Materials needed**

Flip charts, markers

## **Session Plan with Facilitator Notes**

### **Starting the Session (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Group work 5 and presentation (70 minutes)**

Form 4-5 groups of participants and ask them to have an in-depth discussion within their respective groups about the various steps that need to be undertaken in the course of preparing a hospital disaster management plan. (40 minutes)

Ask all the working groups to make their respective presentations in the plenary and encourage participants to ask questions and seek clarifications at the end of each presentation. (30 minutes)

### **Wrap-up presentation (15 minutes)**

The facilitator will draw the main points from all the presentations made and discussions held and present it to the participants in the form of a wrap-up presentation summarising the key learning from the session.

## Technical Notes

The aim of a hospital emergency/disaster plan is to provide prompt and effective medical care to the maximum possible, in order to minimise morbidity and mortality resulting from any disaster event. The main objective of a hospital emergency/disaster plan is to optimally prepare the staff and deploy institutional resources of the hospital for effective performance in different disaster situations.

The hospital disaster plans should address both, the mass casualties which may result from disaster event that has occurred away from the hospital and also the situation where the hospital itself has been affected by a disaster – fire, explosion, flooding or earthquake.

How do hospitals begin to formulate an adequate disaster management plan? <sup>3</sup>

The responsibility to develop the plan should ideally be given to a committee. This could be in the form of a disaster preparedness committee or a subcommittee of the safety committee, if there is one. The committee should include representatives from every department in the hospital.

The disaster planning committee should include representatives from the following:

- Medical staff (ER physician or trauma surgeon)
- Administration (includes risk manager)
- OR manager
- Nursing staff
- Emergency department
- Security
- Communications
- Public relations
- Medical records and admissions
- Engineering/maintenance
- Laboratory
- Radiology
- Respiratory therapy

This process must be a team effort. No one activity should be given preference over another. The committee members should serve extended terms and rotate off to assure continuity, and they should have the ability to dedicate the time needed to produce a viable plan. The committee should look at each type of disaster that may affect the facility. With the various types of disasters come problems and situations inherently unique to that specific situation.

The committee should initiate an assessment to determine the hospital's capability, potential problem areas and other concerns that must be addressed during a disaster. The entire premise should be examined to see how a disaster will have an effect on the building and how health care will be provided.

Questions need to be asked, such as:

- Is there a well on the property and is it connected to the emergency generator?
- If triage has to be done outside of the hospital, is there power in the designated area and is it on the emergency generator?

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<sup>3</sup> <http://www.ashe.org/advocacy/organizations/TJC/ec/emergency/hospdisasterprepare.html>

- Will the air handlers have water if the local water supply is damaged?
- How will water be rationed?
- How will food be provided?
- How will communications be performed (internally and externally)?

Equipment and supplies must also receive the same scrutiny.

- Are there enough supplies to take the hospital through the first 72 hours post-disaster?

Another type of assessment should be an evaluation of where the staff resides. For instance, in an earthquake or flood scenario, personnel who live in the affected portions of the community may not be able to make it into work. Therefore, staffing will have to be adjusted to meet needs.

- Will staff members be permitted to cross security disaster area lines with their current identification?

To determine needs after the assessments are completed, the gaming process can be used. Different scenarios should be brainstormed and played. This process will help to identify shortcomings before an actual situation is experienced.

### **Changes in Patient Needs**

Changes in the way health care is delivered has generated another requirement for disaster planning: like the decision of the hospital to discharge patients to home health care is critical and should be taken after due consideration. Some of the special needs of certain types of patients need to be recognised and addressed upfront: for example, dialysis patients are treated on an outpatient basis.

There are all types of special needs patients in our communities. Plans should be made with their family members or friends to evacuate them during times of disasters. For those patients who cannot rely on their own means of evacuation, local emergency preparedness agencies must be used for transportation.

In order for these emergency preparedness agencies to properly evacuate patients, the hospital or home health agency should have the ability to provide patients' locations and their specific needs as quickly as possible (consult with the local emergency preparedness agency to establish time frames).

### **The "Buddy System"**

Mutual aid agreements with other health care facilities should be included within hospital disaster management plans. These agreements should be for personnel, supplies, equipment, transportation and whatever else that may be required in the event of a medical/health emergency due to disasters. These aid agreements should be made with hospitals and vendors both within your hospital's locale and outside of what may be the affected area. These agreements should be written and signed by all parties involved.

### **Keep It Simple**

A simple document that is easily understood by all concerned is the best. Most hospital disaster manuals are lengthy and contain voluminous amounts of information. While the information contained in the manual may be very important in assisting staff's reaction to different situations, it will not be used unless it is understood clearly by everyone.

In practice, hospital staff members usually do not have time to familiarise themselves with every aspect of the disaster manual, until there is an actual occurrence and experience. Hence, disaster manuals need to be comprehensive, yet simple. Where possible, important tasks, procedures, supplies, equipment, etc. should be made available in a checklist format. Each job within the hospital should have a checklist for its specific tasks related to the provision of emergency health services.

### **Recovery**

The disaster recovery phase is rarely addressed in hospital disaster management plans; however, when the disaster is over, the work in fact has just begun. Hospital disaster planners and safety personnel must quickly pass through the denial that nothing will ever happen to their facility and begin to deal with the realities.

It is important to clearly identify the point at which recovery begins. Planning for recovery begins before anything ever happens. Hospitals should start with a complete inventory of their assets including buildings, beds and equipment. In the course of planning for recovery, the following need to be considered: as new buildings are built, additional portions are constructed; major renovations occur within the hospital; any other addition or improvement that has occurred to the inventory; photographs or videos are taken to build a historical file that can be presented to an insurance agent post-occurrence. "A picture is worth a thousand words" is very true for advance planning, and not just a catchy phrase.

In order to facilitate smooth processing of insurance claims, pictures are a huge help, as they present the actual condition prior to any damage. In hurricane zones, the staff has time to run around and photographically document the current condition of the campus prior to the storm's landfall. Tornadoes, fires and earthquakes do not allow that luxury. All damage prior to its removal or clean-up must be photographed for future reference and use.

The building(s) should be assessed for structural damages soon after the disaster event. This can be done by in-house engineering staff or through an outside contract with a professional engineer. It must be decided if the building is safe for continued occupancy. This will be a major determining factor whether total evacuation is necessary and what level of care the hospital can provide.

There are common post-occurrence problems that must be addressed during the recovery phase. They are not disaster specific and must be addressed during the planning phase so that if they do occur, back-up systems or support from those with whom reciprocal agreements have been signed can be initiated.

### **Mock Drills**

Disaster plans are no help to anyone unless they work. Other than during a disaster itself, the only way to actually test a plan is through organised mock drills. Do not focus totally on patient treatment. In case of widespread damage due to disaster, there might not be much of a facility left to offer the required kind of treatment and emergency health services, as it happened to the city hospital in Bhuj following the Bhuj earthquake of 2001 in India.

If the hospital is in a cyclone zone, utilise "table top exercises" to test preparation during certain time periods prior to landfall. Most planning is done in 24-hour increments (24-48 hours prior to land-fall, zero-24 hours prior, etc.). Then you can focus on receiving patients.

You do not have to be in a cyclone zone to have table top exercises. During the next disaster drill, involve the hospital engineer in solving problems that could be generated from a flood, earthquake, tornado or fire. Ask your local emergency preparedness agency (SDMA or DDMA) to include your facility in its exercise. Take advantage of these exercises and involve all staff, not just the emergency room staff. If you are an accredited facility passed through the Joint Commission, you must have no less than two exercises per year and most licensed organisations require a minimum of one.

The biggest obstacle in hospital disaster preparedness is finding time for staff to devote to developing a comprehensive, workable plan. However, hospitals must realise how important it is to plan for a disaster, even though one may never occur. Hospital disaster plans should prepare a hospital for any type of disaster that might happen. Extensive planning must occur utilising the talents of many people throughout the organisation. How your facility is prepared to "weather the storm" is as important as how it recovers from the storm. The efforts of the planning will result in how your hospital will be able to serve the community after a disaster. The cycle of planning, exercising and rewriting is never ending. The more you engage in the process, the better prepared you will be.

The suggestions as mentioned above are indicative and not a comprehensive guide for preparation of hospital disaster management plans. Hence, planning process should be open, participatory and responsive to local context and conditions with focus on existing disaster and climate related emergencies and risks of the region where the facility is located.

## Session 3.3: Phasing of hospital disaster management plan

**Duration:** 90 minutes

**Objectives:** At the end of the session, the participants will be able to define the need for preparing the hospital disaster management plan to meet the specific requirements of different phases of the disaster management cycle

**Method:**

- Interactive lecture presentation
- Discussion in the plenary

**Materials needed**

Flip charts, markers, A4 size paper, double sided adhesives, scissors, and board pins

## Session Plan with Facilitator Notes

### Starting the Session (20 minutes)

Start with sharing the purpose of the session and its intended learning outcome. Follow this up with a little brainstorming on planning requirements across different phases of the disaster management cycle, namely response, recovery, mitigation and preparedness. Write out the responses of the participants on a flip chart in the plenary with the help of a couple of volunteers for writing on the flip chart. Or alternatively give each participant a flash card and a felt pen to write out their responses and put it up on the wall on the space provided for the purpose. After everyone has put up her/his response, ask them to share it with the entire group.

**Interactive Lecture Presentation: (25 minutes).** This presentation has to be not more than 20 minutes and should explain all the different phases of disaster preparedness plan. Use appropriate examples and illustrations for making the key points. This presentation can be done using the power point, flip charts and flash cards as decided by the facilitator. (20 minutes)

The presentation has to be a two way process involving the participants in raising questions, seeking clarifications and offering inputs for identifying differential medical/health needs that need to be addressed during different phases of the disaster management cycle.

### Question and Answer and Discussion (25 minutes)

Presentation will be followed by a question and answer (Q&A) session. Q&A session will aim at encouraging the participants to raise questions and seek clarifications after the presentation is over. A general discussion on the issues arising out of the Q&A session should follow and be moderated by the facilitator to bring out the key learning points of the session. The session should end with the following two group exercises and a wrapping up by the facilitator.

### Group Work 6: Planning requirements across different phases (20 minutes)

Divide the participants into groups of four or five. Distribute flip chart paper to each group. Allow the participants for 10-15 minutes to reflect on the different phases of the disaster preparedness plan using the following matrix.

| Different Phases | Planning Requirements |
|------------------|-----------------------|
| Response         |                       |
| Recovery         |                       |
| Mitigation       |                       |
| Preparedness     |                       |

## Technical Notes

To make the proceedings easier it is recommended that the hospital administrators embark upon disaster planning using a phased plan. The hospital emergency planning can be divided into three phases:

### 1. Pre-disaster phase

**A. Planning:** Most of the assessment and planning is done in the pre disaster phase; the hospital plans are formulated and then discussed in a suitable forum for approval.

**B. Disaster manual:** The hospital disaster plan should be written down in a document form and copies of the same should be available in all the areas of the hospital.

**C. Staff education and training:** It is very important for the staff to know about and get trained in using the hospital disaster/ emergency manual. Regular staff training by suitable drills should be undertaken in this phase.

### 2. Disaster Phase

**A. Phase of activation:** Alert and notification of emergency.

**B. Activation of the chain of command in the hospital.**

**C. Operational phase:** This is the phase in which the actual handling of mass casualties takes place as per the disaster/ emergency plan prepared.

**D. Phase of deactivation:** An important phase of the hospital emergency plan when the administration/ command of the hospital is satisfied that the influx of mass casualty victims is not continuing to overwhelm the hospital facilities.

**3. Post-Disaster Phase –** This is a very significant phase of disaster management planning, as this is the time to learn: in this phase activities of the disaster/ emergency phase are discussed and the inadequacies and shortcomings are noted for future improvements.

## Session 3.4: Pre disaster planning

**Duration:** 90 minutes

**Objectives:** At the end of the session, the participants will be able to identify and explain all the activities that would need to be undertaken during the pre-disaster planning

**Method:**

- Group work
- Presentation and discussion in the plenary
- Summing up

**Materials needed**

Flip charts, markers, A4 size paper, double sided adhesives, scissors, and board pins

## **Session Plan with Facilitator Notes**

### **Starting the Session (5 min)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Group work 7 and presentation (70 minutes)**

Form 4-5 groups of participants and ask them to have an in-depth discussion within their respective groups about different aspects of pre-disaster planning as input into preparing a hospital disaster management plan. (40 minutes)

Ask all the working groups to make their respective presentations in the plenary and encourage participants to ask questions and seek clarifications at the end of each presentation. (30 minutes)

### **Wrap-up presentation (15 minutes)**

The facilitator will draw the main points from all the presentations made and discussions held and present it to the participants in the form of a wrap-up presentation summarising the key learning from the session.

## Technical Notes

Most of the planning of hospital emergency plans is done in pre disaster phase. It is always good to have a ready working plan before next emergency strikes.

- **Hospital Disaster Management Committee:** Formation of a disaster/ emergency committee is the first step for making a disaster plan for the hospital. Most of the hospitals already have such hospital management committees, but they are more virtual than real; therefore, an emergency/ disaster management committee can be carved out from such already existing committees. The members of the disaster management committee should be from the basic facilities of the hospital and need to be actively involved in the functioning of the committee.
- **Central Command Structure (Incident command system or ICS) for your hospital**  
In order to ensure effective control and avoid duplication of action, there should be a unified command system which should be based on the individual hospital hierarchical chain. The advantages of ICS are many. It has predictable chain of management; flexible organisation charts allowing flexible response to specific emergencies; prioritised response checklists; accountability of position function; improved documentation; a common language to promote communications and facilitate outside assistance; cost effective emergency planning within the hospital.
- **Job Cards**  
Action sheets or job cards are basis of a successful disaster/ emergency management plan. These sheets should be made for each and every position in the organisational chart of the command system. The job cards should be detailed; stored safely (in disaster manual); colour coded and laminated.
- **Plan activation of different areas of hospital**  
The areas which should find a mention in a hospital emergency plan are:
  - Command centre.
  - Communications office/ paging/hotline area/telephone exchange.
  - Security office
  - Reception and triage area.
  - Decontamination area (if needed).
  - Minor treatment areas.
  - Acute care area (emergency department).
  - Definitive care areas (OTs, wards).
  - Intensive treatment area and activation of High
  - Mortuary.
  - Holding area for relatives/ non-injured.
  - Area for holding media briefings (separate media/ PRO/spokesperson room).
  - Area for holding patients in case a part of the hospital is evacuated.
- **Disaster beds/ how to increase bed capacity in emergencies?**  
The newly arriving patients would require admission for definitive treatment: therefore, plans should be there to increase the bed capacity when needed. This can be achieved by the following actions:
  - Discharge elective cases.
  - Discharge stable recovering patients.
  - Stop admitting non-emergency patients.
  - Convert waiting/non-patient care areas into makeshift wards.

- **Logistics planning**

- **Planning for communications (within and outside the hospital)**

Communications is one of the main problems in major emergencies and disasters. Information transfer has to be reduced to most important facts only. Multiple means of communications should be planned to communicate with hospital staffs and administrator.

- **Transportation (To and from the site/ other hospitals)**

Transportation is critical in emergency situation in order to optimise on the response and treatment time, which carries the potential to save many more lives. Quick and safe transportation of disaster victims and patients from the disaster site and location of mass casualty incident to the hospital is critical. Transport is also required to transfer patients to other hospitals if the facilities at the hospital in question are overwhelmed or are unable to perform its functions due to internal damage.

The transport room/driver room should also have a telephone or any other means of communication like wireless to remain in touch with the control room on a continuous basis.

- **Stores planning**

It is recommended that adequate stores of linen, medical items, surgical instruments should be kept separately in the Emergency/Casualty and should be marked the "Disaster Store". The activation of this store is done only after the Disaster has been notified by the appropriate authorities. As immediate measures, the buffer stocks earmarked for the Casualty/Emergency Services should be utilised till the fresh stocks are replenished from main hospital stores/ disaster stores.

- **Personnel Planning - Medical and Non-Medical**

- Medical Staffs:**

In addition to the members of clinical staff, para and preclinical disciplines (if present in the facility) should render their services in managing the casualties.

Duty roster for standby staffs should be available in the control room/Command centre.

- Nursing Staffs:**

The Nursing Superintendent should be able to prepare a list of nursing staff who may be made available at a short notice. The nursing personnel officer should be also able to mobilise additional nursing staff from non-critical areas.

- Other Staffs:**

Duty roster (including those on standby duty) of all ancillary medical services (e.g. Radiology, Laboratory, Blood Bank) and also other hospital services (e.g. housekeeping, sanitation, stores, pharmacy, kitchen etc.) should be available with the duty officer/ hospital administrator.

- **Essential Ancillary Services (Lab, Radiology, Pharmacy)**

- 1. Laboratory Services**

Department Head or designee will call in their own personnel as needed after reporting to Command Centre. Call personnel from nearby hospitals and

clinics as necessary. Have arrangements made to obtain additional blood, equipment and supplies from area agencies.

### **2. Radiology Services**

Department Head or designee will call any or all personnel needed. Arrange for extra supplies to be brought in if needed. Coordinate flow of work and delegation of work areas. Other members of the Radiology staff will: Perform all x-ray exams/ CT scans/ Ultrasounds etc. as needed and assigned.

### **3. Blood Bank**

This facility should be open and available round the clock during emergencies, as critical patients may require blood anytime.

### **4. Mortuary Services (Care for the dead)**

Mortuary should be situated away from the main entrance of the hospital. It should be adequately staffed with Senior Forensic Specialist/ any designee appointed for that purpose.

## **Other Ancillary Services**

### **1. Hospital Dietary Services (Kitchen)**

Department head or designee will call in their own personnel as needed after reporting to Command Centre. Prepare to serve nourishments to ambulatory patients, in-house patients and personnel as per their varying needs. Utilise additional areas for extra eating space. Be responsible for setting up menus in disaster situation and maintain adequate supplies.

### **2. Sanitation Services**

Adequate sanitation services within and around the hospital should be ensured by the hospital administration. This will save the inmates of the hospitals from secondary infections and also help prevent the spread of communicable diseases within the hospital space.

### **3. Hospital Laundry and Sterile Supply**

The hospital administration should ensure adequate supply of clean hospital linen, sterile dressing and sterile supply of instruments to the essential areas of the hospital.

### **4. Essential Services**

**Water:** Adequate provision should be made to meet the additional requirement of water. Planning should also be done for alternative sources of water such as storage tanks or tube well which can provide water in case of possible breakdown in the normal system of supply.

**Light and Power:** Provision should be made for standby generators to provide light and power to essential areas of the hospital like Emergency Department, Operation Theatres, ICUs etc.

## Learning Unit 4: Hospital disaster management plan: review and implementation

### Enabling objectives

- Articulate the key elements of a good plan.
- Prepare checklists for reviewing the hospital safety
- Work out requirements for the training of hospital staff and organising mock drills

### Sessions

- Effective hospital disaster management plan: key elements
- Preparing checklist for hospital safety
- Training of hospital staff and mock drills

**Estimated time:** 270 minutes

### Expected Outcome

At the end of the module, the participants would have acquired an informed understanding of the key elements of a good hospital disaster management plan and points of review of hospital safety.

## Session 4.1: Effective hospital disaster management plan: key elements

**Duration:** 90 minutes

**Objectives:** At the end of the session, the participants will be able to articulate the key elements of an effective hospital disaster management plan.

**Methods:**

- Group Work
- Presentation and discussion in the plenary
- Interactive Lecture Presentation
- Summing up

**Materials needed**

Flip charts, markers

## **Session Plan with Facilitation Notes**

### **Introduction (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Group Work 8 (30 minutes)**

Form 4-5 groups of participants and ask them to have an in-depth discussion in their respective groups about the key elements of a good hospital disaster management plan and hospital safety plan.

Ask them to prepare their group presentations on the basis of the discussions held.

### **Presentation and discussion in the plenary (30 minutes)**

All the working groups make their presentations, which are followed up by questions and answers and discussion in the plenary.

### **Interactive Lecture Presentation (20 minutes)**

With the help of flip charts or power point make a brief presentation of the key elements of an effective disaster management plan.

### **Summing up (5 minutes)**

On the basis of the points made during group presentations identify the critical elements of a hospital disaster management plan including hospital safety plan.

Summarise the key learning from the session.

## Technical Notes

The purpose of a preparedness plan is to respond effectively to events that pose an immediate threat to the health and safety of patients, staff, and visitors.

The plan should consist of a number of procedures designed to respond to those situations most likely to disrupt the normal operations of the hospital and return the hospital to a normal status. A hospital disaster preparedness plan is meant to be an all hazards plan and is designed for each emergency identified in the hazards, risk and vulnerability analysis that could impact the operation of the hospital. The hospital disaster preparedness plan is developed to assure availability of resources for the continuation of patient care during an emergency. The plan should also address the medical needs of victims of a hospital or community based incident.

Hazard, Risk and Vulnerability and Capacity Analysis (HRVCA) exercise has to be carried out as an input into the planning process. This will help assess the impact of likely emergencies to be used as a guide to the development of the plan. The HRVCA should be reviewed at least annually to determine the likely changes in emergency assessments.

An effective disaster management plan should include the following elements:

**Emergency Response Plans:** Emergency Response Plans are developed and maintained for each of the emergencies identified as priorities in the HRVA.

**Management Plan:** Management plan should describe the processes it implements to effectively manage emergencies affecting the facility, patients, staff, and to respond to emergencies in the community that cause an influx of patients. This Plan should be evaluated annually, and changed as necessary, based on changes in conditions, regulations and standards, and identified needs.

**Mitigation, Preparedness and Recovery Plans:** Emergency Response Plans should include the activity designed to mitigate the impact of the emergency, such as building elements, and specialised equipment, and to prepare for the emergency with activities including staff training, adequate supplies, and equipment for responding the potential emergency, and plans to handle the space and facilities during emergency situations.

The Emergency Response Plans should include the specifics of the response, including job assignments, staffing strategies and the management of patients, both victims of the emergency and existing patients. The plans for recovery should include the immediate cessation of the emergency plans, and return to normal operations, critique and evaluation of the response to the plans, and changes to the plans to improve them. Recovery plans for incidents that directly affect the hospital facility should be done as quickly as practical after the event, and should include the interim measures to provide for ongoing patient care.

### Processes for Implementing the Plans, and Recovery Processes

The plan should clearly state the criteria for, and the processes to initiate the plan and how the plan will be implemented. The criteria should include example of the conditions that indicate the plan should be activated, the individual(s) responsible for initiation of the plan, and the use of the command structure to manage the emergency.

The plan should also include the response elements for staff and facility use. The plan should define when the plan should be terminated, and the transition back to normal,

including recovery elements such as capture of medical record information, financial information, and restoration of areas modified for the emergency use, and return to normal management processes.

### **Processes to Notify Staff of Emergency Implementations**

When emergency plans are implemented, a number of methods should be used to notify affected staff. Primary within the hospital can be the audible page system, used to announce codes to alert the staff to the emergency. In addition, communications tools such as telephones and pagers should be used to assure key staff are aware of the situation. For notifying staff away from the facility, telephones, cell phones, and radio pagers should be used.

### **Notifying Governmental Authorities**

The plan should include a current list of governmental and commercial organisations that must be notified to effectively implement the plan.

**Assignment of Staff:** The ICS should be used to assure that each implementation includes staff as needed to effectively activate the plan. The system should be based on the use of checklists and an organisation chart, to assure each task is considered, and staff is made available to complete those tasks.

### **Management of Patient Care Activity**

The hospital disaster preparedness plan should address the management of patient care activities. The plan should include procedures for discontinuation of elective treatment, for evaluation of patients for movement to other units, release to home or transfer to other facilities as space is needed. The plan also includes procedures for the management of information about incoming patients and about current patients for planning, patient management, and informing relatives and other; and for transport of patients.

### **Relocation and Evacuation of the Facility**

A facility evacuation plan should be in place and can be implemented in phases. Relocation of staff away from the area of emergency may be undertaken by staff on the spot, moving to areas in adjacent zones. A full evacuation should be implemented if the impact of an emergency renders the hospital inoperable or unsafe for occupancy.

### **Annual Review of Management Plans**

The plan should be evaluated on an ongoing basis at least annually. The appraisal should identify components of the program that need to be instituted, revised or deleted.

#### **Key Learning Points**

- The purpose of a preparedness plan is to respond effectively to events that pose an immediate threat to the health and safety of patients, staff, and visitors.
- The plan should consist of a number of procedures designed to respond to those situations most likely to disrupt the normal operations of the hospital and return the hospital to a normal status.
- A hospital disaster preparedness plan is meant to be an all hazards plan and is designed for each emergency identified in the hazards, risk and vulnerability analysis that could impact the operation of the hospital.

## Session 4.2: Preparing checklist for hospital safety

**Duration:** 90 minutes

**Objectives:** At the end of the session, the participants would have prepared a checklist for hospital safety.

**Methods:**

- Group work
- Presentation and discussion in the plenary
- Summing up

**Materials needed**

Flip charts, markers, handout

Handout 5: Checklist for hospital safety

## **Session Plan with Facilitation Notes**

### **Introduction (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Group Work 9 (45 minutes)**

Form 4-5 groups of participants and ask them to have an in-depth discussion in their respective groups about the key elements that should constitute the checklist for hospital safety.

Ask them to prepare their group presentations on the basis of the discussions held.

### **Presentation and discussion in the plenary (35 minutes)**

All the working groups make their presentations, which are followed up by questions and answers and discussion in the plenary.

### **Summing up (5 minutes)**

Summarise the key learning from the session.

Note: Distribute the checklist given in hand-out 5 to the participants as ready reference for the future

## Technical Notes

A good disaster plan will address any contingency that the hospital may face. Hospitals tend to use a generic approach when preparing their disaster plans. However, not all disasters are the same. Some will involve mass casualties while others will involve the facility and its operation. A disaster plan should be simple so that all staff can understand it, but thorough enough so that if a disaster should strike the hospital or its surrounding community, staff will be able to respond appropriately.

Here are some ideas to help evaluate a disaster plan and issues that should be addressed within the document. This checklist is not intended to be comprehensive; it is developed as a tool to assist in planning.

### I. Square One

- A. Has a disaster planning committee been formed?
- B. Are there representatives from the medical staff (particularly from the emergency department and surgery), nursing, various support services and administration?
- C. Has this committee been charged with overseeing the development of the disaster manual?
- D. Does this committee review and critique disaster drills and evaluate whether changes need to be made to the disaster manual?
- E. Has the Board of Trustees been informed of its responsibilities in the event of a catastrophe to the hospital, and is it willing to delegate certain decision-making to the CEO for expenditure of funds for emergency needs/repairs?

### II. Address the Threat

- A. Is the area in which your hospital is located susceptible to:
  - 1. Hurricanes?
  - 2. Earthquakes?
  - 3. Cyclones?
  - 4. Nuclear accidents?
  - 5. Physical attacks?
  - 6. Flooding?
  - 7. Chemical spills?
  - 8. Fire?
  - 9. Any Other?
- B. If the answer is YES to any of the above, have you addressed the following?
  - 1. How each disaster will affect the facility?
  - 2. How each disaster will affect the road network surrounding the hospital?
  - 3. How each disaster will affect the staff's personal life (family and homes) and possibilities of housing certain staff within the hospital during the period following the disaster?
  - 4. Types of injuries caused by each disaster.
  - 5. Types of staff, supplies and medication needed for each type of disaster.
  - 6. Additional support needed to react to each disaster.
  - 7. Photographic documentation of building(s) and equipment (pre-disaster).

### **III. Organise Staff**

- A. Is there a call-back roster and is it updated frequently? Does the roster include the individual's cellular telephone and beeper numbers, when applicable?
- B. Is there a roster for outside support activities needed during a disaster and is it updated frequently?
- C. Have personnel responsibilities been defined and a checklist developed for each key position?
- D. Are there rosters of personnel from within the hospital whose duties are changed when a disaster occurs, and are they aware of their responsibilities?
- E. Has a chain-of-command been developed for the hospital and its departments?
- F. Have communication links been developed within the hospital when normal communication services are disrupted?
- G. Has a command centre been identified, as well as personnel who will occupy the centre and equipment that will be needed?
- H. Has a security plan been developed?
  - I. Has each department developed its own checklist of what needs to be done within its areas to prepare for or react to a disaster?

### **IV. Survey the Facility**

- A. Location of the Hospital Command Centre
  - 1. Is it a central location, easily accessible and familiar to staff?
  - 2. Is the location isolated from where patient care will be given?
  - 3. Are there adequate telephone lines into the location (at least one direct line out of the building)?
  - 4. Will press briefings be given from this location or will another place be designated?
  - 5. Is the location powered by the emergency generator?
  - 6. Is it large enough for command activities?
  - 7. What furniture will be needed during command centre operations?
  - 8. Are tasks for those manning the command centre formulated?
  - 9. Have you made photos of your buildings and structures on your campus?
  - 10. Have you evaluated your insurance coverage with your insurance agent?
  - 11. Has your facility been equipped to connect with an external, mobile emergency generator if necessary?
- B. Treatment of emergency patients
  - 1. Will there be too many patients for the space in the emergency department?
  - 2. Where will triage take place?
  - 3. Will patients have to be evacuated? Where to? How will they get there?
  - 4. Will decontamination from a chemical or radioactive material exposure be required? Where and with what equipment?
- C. Damage assessment to the hospital
  - 1. Is the structural integrity of the building compromised?
  - 2. Is the emergency generator damaged?
  - 3. Are there alternative sources of essential utilities?
  - 4. Are elevators safe?
  - 5. Is the water system functional?

6. Is water safe to drink?
  7. Are ceilings safe to work under?
  8. Is the HVAC system working?
  9. Are communication systems working?
  10. Is the sewage system working?
  11. Are the fire suppression and alarm systems working?
  12. Is there a water rationing plan in the event of water outage or other water problems?
  13. Is there a camera with adequate amount of film available to record damages to the building and equipment for insurance purposes?
- D. Identify patient rooms that may have to be used by physicians and staff if their presence is required around the clock.

## **V. Supplies**

- A. Are the following supplies identified or stored for use during a disaster?
1. Flashlights and batteries
  2. Water for immediate use
  3. Medical supplies
  4. Medical equipment (batteries charged)
  5. Beds
  6. Wheel chairs
  7. Linen
  8. Litters
  9. IV equipment
  10. Bed pans and urinals
  11. Pharmaceuticals
  12. Cellular telephones or other communication linkages
  13. Food
  14. Other supplies and equipment identified by the disaster planning committee
  15. Weather alert receiver
  16. Extra supply of oxygen
  17. Plywood to protect windows (minimum of  $\frac{3}{4}$ " thick)
  18. Adequate fuel supply for the emergency generator
  19. Sand bags and rolls of plastic if located in flood prone areas
- B. Are there emergency "disaster kits" (flashlights, batteries, etc.) located on patient care floors, treatment areas or other designated areas that are immediately accessible if a disaster were to occur, and are they inspected at least annually? (Prior to hurricane season for coastal hospitals.)
- C. Have mutual agreements been signed with another hospital(s) (in and outside of your location) to assist in furnishing supplies/equipment in the event there is a need?
- D. Have agreements been made with vendors (in and outside of your location) to furnish supplies/equipment during a disaster?
- E. Are status reports given daily on supplies and equipment during recovery period?

## **VI. Accounting**

- A. Are the computers that contain vital records and financial information on the emergency generator and uninterrupted power sources?

- B. Are there computer back-up files kept by the medical records and accounting departments and stored in a safe place (where they will not receive water or wind damage)?
- C. Is there a system to gather insurance information from patients who present themselves or someone else to your hospital during the disaster?
- D. Is there a system to pay employees by cash in the event of a major disaster?
- E. Does the CEO have the board's approval for layoffs or over-hires during a disaster?
- F. Is there a system in place to pay or reimburse for patient transfers and/or "out of the ordinary" services that are generated by a disaster?

## **VII. Patient Care**

- A. Is a procedure in place to discharge patients who can be discharged?
- B. Is a triage area determined if the emergency department is over flowing?
- C. Are medical department roles spelled out?
- D. Are standing orders developed?
- E. Are there plans to care for community special needs patients, e.g., dialysis patients, oxygen dependent patients, etc.?
- F. Are there agreements with other facilities to transfer patients that require a higher level of care?
- G. Have arrangements been made for transportation of those patients being transferred?
- H. Has a protocol been developed to determine which patients require staff accompaniment during transfer and what level of staff is to accompany the patient?
  - I. Have transportation routes been determined for the transfer of patients?
  - J. Are status reports given on patient census and bed availability?

## **VIII. External Coordination**

- A. Has contact been made with the following entities to coordinate each other's role during a disaster?
  - 1. County emergency preparedness agency
  - 2. Local chapter of the Red Cross (it operates disaster shelters and offers assistance to disaster-stricken persons)
  - 3. Long-term care facilities in the hospital's vicinity
  - 4. Other organisations which care for special needs patients which may end up in your facility
  - 5. Local National Guard (remember, its assets and services belong to the Governor during disasters)
  - 6. Other hospitals, should you have to evacuate
  - 7. Fire department
  - 8. Police department
  - 9. Emergency medical services (ambulances, private and public)
  - 10. Local utility companies
  - 11. External means of transporting patients (bus companies)
  - 12. Local funeral homes for temporary morgue facilities
- B. Coordinate with other hospitals or vendors in developing assistance agreements for supplies, equipment and/or personnel.

- C. Coordinate with local amateur radio operators to assist you in the event of communication disruption (this will require having radios within your facility and antenna on your roof).

**IX. Evacuation**

- A. Who authorises evacuation of the hospital?
- B. For partial evacuation, are areas identified within the hospital where patients will be evacuated? Consider utility requirements for ICU/CCU and OR patients.
- C. Has coordination been planned with receiving unit, and is there equipment to transport when partial evacuation is required?
- D. For full evacuation, has coordination been arranged with receiving facilities and has transportation been arranged to move the patients?
- E. Identify who will accompany relocated patients.
- F. Are evacuation routes identified?

**X. Drills**

- A. When you conduct disaster drills, are all types of disasters eventually addressed?
- B. Are all aspects of a supposed disaster tested or only mass casualties?
- C. Do drills include testing external agreements that you have with hospitals/vendors?
- D. Are areas of the plan tested other than activating the recall roster?
- E. Do staff members understand their functions during a drill?
- F. Are drills evaluated using criteria determined by the disaster planning committee or the safety committee?
- G. Are drills critiqued to determine short falls and strengths?
- H. Is the entire disaster planning committee present for critiques?
  - I. Is the disaster manual corrected when short falls are determined?
- J. Are new employees educated in what is expected of them during a disaster?
- K. Are all hospital activities involved in disaster drills: engineering, materials, biomedical engineering, accounting, etc.?

**XI. Recovery**

- A. Have you made video or taken photos of the damage to the buildings on your campus?
- B. Have you contacted your insurance agent?
- C. Have you made a damage assessment?
- D. Are your buildings structurally sound?
- E. Will you have to totally evacuate or curtail certain services?
- F. Will outside staffing be required to allow your staff members time to take care of their personal disaster needs?
- G. Have broken windows and roof openings been covered?
- H. Is there equipment and/or supplies that need to be protected from the elements if there is damage?
  - I. Are there any environmental concerns?
- J. Have you categorised all disaster-related costs with a separate cost code for accounting purposes?
- K. Have you established a crises counselling opportunity for staff affected by the disaster?

This checklist is not meant to be all encompassing. The intention is to stimulate idea sharing and coordination among the designated committee members to develop the disaster plan for the hospital.

(Developed by Paul V. Richter, 4/95. Revised 1/96, 4/96, 1/97, 6/97)

**Key Learning Points**

- A good disaster plan will address any contingency that the hospital may face.
- A disaster plan should be simple so that all staff can understand it, but thorough enough so that if a disaster should strike the hospital or its surrounding community, staff will be able to respond appropriately.
- A generic approach should not be used when preparing disasters plans for hospitals

## Session 4.3: Training of hospital staff and mock drills

**Duration:** 90 minutes

**Objectives:** At the end of the session, the participants would be able to explain the training requirements of the hospital staff for effective implementation of the prepared hospital disaster management plan and the role of mock drills in ensuring preparedness.

**Methods:**

- Group work
- Presentation and discussion in the plenary
- Summing up

**Materials needed**

Flip charts, markers, handout

**Handouts**

Handout 6: T.R.A.I.T. of a Health Emergency Manager/Coordinator

## **Session Plan with Facilitation Notes**

### **Starting the Session (5 mins)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Group Work 10 (40 minutes)**

This group work is designed to engage the participants in an in-depth discussion on the training requirements of the hospital staff for putting the prepared hospital disaster management plan into action and the role of mock drills in ensuring preparedness.

Form 4-5 groups of participants and ask them to work out the specific training requirements of various members of the hospital staff including doctors, nurses, and paramedics for putting the plan into action. Another component of the task will be to define the nature of mock drills required and their role in ensuring preparedness.

### **Presentation and Discussion in the Plenary (40 minutes)**

All the working groups will make their presentations, which will be followed up by questions and answers and discussions in the plenary.

Close the session with a summary of the key learning points from the session. (5 minutes)

## Technical Notes

Once the disaster plan is ready, the next phase would be one of education and training of the staff of the hospital about the plan and specific roles of each staff member in case of a disaster.

### Concept of Common Language in Disaster Situation

The initial chaos of any disaster scenario in a hospital can be minimised by proper training of the hospital staff about their roles and responsibilities in case of a MCI/disaster so that, everyone knows his/ her job and work continues in an orderly fashion without confusion.

### Introduction of Disaster Management Training to Hospital Leadership

A presentation made to all administrators, department heads and managers regarding the implementation of the Hospital Disaster Plan into the facility's emergency response plan will help solidify support in all areas of the hospital. This program should be a combination of education and public relations. Managers should be made to feel that they are all an integral part of the new system. Interested managers can be recruited to become part of a training the trainers.

### Introductory Lessons for all Hospital Staff

An orientation and education program is required for personnel who participate in implementing the emergency preparedness plan. Education should address the following

1. Specific roles and responsibilities during emergencies,
2. The information and skills required to perform duties during emergencies
3. The backup communication system used during disasters and emergencies, and
4. How supplies and equipment are obtained during disasters or emergencies.

### Disaster Drills

As a part of the emergency management plan, every hospital is required to have a structure in place to respond to emergencies. This structure is routinely tested during drills. The evaluation modules for hospital disaster drills are designed to be a part of that testing. Viewed in this way, hospital disaster drill evaluations can provide a learning opportunity for all who participate in a planned drill. The disaster drill evaluation modules present topics for evaluation in a systematic manner. They should be used to identify strengths and weaknesses in hospital disaster drills, and the results gained from evaluation should be applied to further training and drill planning. Although the evaluation modules can be used to identify improvement in repeated drills, they are not intended to be used to make final or complete judgments about whether a hospital passes or fails in its planning and training endeavours. The value of this approach is to identify specific weaknesses that can be targeted for improvement and to promote continuing efforts to strengthen hospital disaster preparedness.

### Table Top drills

Table Top Exercise is a paper drill intended to demonstrate the working and communication relationships of functions found within the disaster organisational plan. 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 plan.

### **Partial evacuation/Non evacuation Drills**

Hospital evacuation may become a necessity if the hospital itself becomes a victim of any disaster, as in the case of a hospital in Kutch during Bhuj earthquake of 2001. 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.

### **Revision of Hospitals Disaster/ Emergency Plan**

Continuous revisions should be made in the Hospital Disaster Management Plan taking leads from the regular disaster drills in the hospital. This would refine the plan and cover up the deficiencies faced in the Drill Phase.

#### **Key Learning Points**

- The initial chaos of any disaster scenario in a hospital can be minimised by proper training of the hospital staff about their roles and responsibilities.
- All administrators, department heads and managers should be aware of the implementation plan.
- An orientation and education program is required from time to time for personnel who participate in implementing the emergency preparedness plan

## **Learning Unit 5: Health information system: monitoring and evaluation**

### **Enabling objectives:**

- Describe the role of health information system in monitoring and evaluation of the hospital disaster management plan and its implementation.

### **Session(s)**

- Monitoring the implementation of hospital disaster management plan
- Evaluation of the hospital disaster management plan

**Estimated time:** 180 minutes (3 hours)

### **Expected Outcome**

At the end of the Learning Unit, the participants would have acquired an informed understanding of the role of health information system in monitoring and evaluation of the hospital disaster management plan and its implementation.

## Session 5.1: Monitoring the implementation of hospital disaster management plan

**Duration:** 90 minutes

**Objectives:** At the end of the session, the participants will be able to explain the process, methods and indicators for monitoring the preparation and implementation of hospital disaster management plan.

**Methods:**

- Group work
- Presentation and discussion in the plenary
- Closing remarks

**Materials needed**

Flip charts, markers

## **Session Plan with Facilitation Notes**

### **Introduction (5 minutes)**

Explain the purpose and process of the session and its intended learning outcome.

### **Group Work 11 (40 minutes)**

This group work is intended to help participants work out the process, methods and indicators for monitoring the preparation and implementation of hospital disaster management plan.

Ask the participants to have an in-depth discussion within their respective groups and determine the following:

- process of monitoring
- methods of monitoring
- indicators of monitoring

Ask the participants to prepare their respective group presentations on the basis of the discussions held.

### **Presentation and Discussion in the Plenary (40 minutes)**

Group presentations are made by the working groups in the plenary. This is followed up by a question and answer session and discussion.

### **Closing Remarks (5 minutes)**

The facilitator will close the session with her closing remarks by highlighting the key learning from the session.

## Technical Notes

Monitoring mostly involves keeping track of what is going on. By undertaking this regularly, the committee which has prepared the plan has the opportunity to adjust the plan to ensure that the above concerns are addressed. This is usually carried out through regular drills, training, orientation and simulation exercises in order to check whether the plan is working. For purposes of accountability, the committee should ensure that this exercise is done on a regular basis and the outcome is properly documented.

Evaluation and review should be an ongoing process of learning and embedding a process of continual improvement and development. The key to evaluation is to know what is being measured. A plan cannot be monitored and evaluated unless the indicators are clear. Effective strategic and operational planning, incorporating clear measurable objectives, is therefore an important element of the monitoring exercise.

The emergency plan should be reviewed at regular intervals to ensure its continued suitability and effectiveness.

Reviews could also be initiated by:

- Changes in legislation
- Advances in technology and equipment
- Changes in organisational direction
- Changes in products and activities
- Lessons from incidents
- Findings of audits, reporting and communication.

It is essential to ensure that the system in the organisation prompts the need for the review of the emergency plan. Reviews would include an evaluation of the appropriateness of the objectives, targets and performance measures of the plan.

### Key Learning Points

- The emergency plan should be reviewed at regular intervals to ensure its continued suitability and effectiveness
- It is essential to ensure that the system in the organisation prompts the need for the review of the emergency plan
- Evaluation and review should be an ongoing process of learning and embedding a process of continual improvement and development
- The key to evaluation is to know what is being measured.

## Session 5.2: Evaluation of the hospital disaster management plan

**Duration:** 90 minutes

**Objective:** At the end of the session, the participants will be able to design an evaluation of the hospital disaster management plan in emergency and post emergency phases.

**Methods:**

- Group work
- Presentation and discussion in the plenary
- Closing remarks

**Materials needed**

Flip charts, markers

## **Session Plan with Facilitation Notes**

### **Introduction (10 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Group Work 12 (30 minutes)**

This group exercise is intended to help participants design a program for carrying out the evaluation of hospital disaster plan and its implementation in emergency and post emergency phases.

Form 4-5 groups of participants and ask them to develop evaluation parameters and criteria for assessing the efficacy of the hospital disaster management plan prepared. Also ask them to spell out the process of carrying out the evaluation along with its time frame and resource requirements.

Ask the participants to prepare their respective group presentations on the basis of the discussions held including agreements and disagreements.

### **Presentation and Discussion in the Plenary (40 minutes)**

Group presentations are made by the working groups in the plenary. This is followed up by a question and answer session and discussion.

### **Closing Remarks (10 minutes)**

As this would be the last session of the base sub module, the facilitator would need to sum up the key learning of the base sub module and its subsequent use and application by the trained master resource persons. As this will also be the precursor to the training of trainer (TOT) module of this package, the issue of adapting the base sub module for further training would also need to be covered in the closing remarks.

## Technical Notes

A critical step in planning evaluation is identification of key questions that will be answered by the evaluation. The intended use of evaluation results often dictates the type of key evaluation questions selected. Incorporating multiple perspectives when developing key evaluation questions will help to generate buy in for the evaluation. If, for example, stakeholders are especially interested in the fidelity of the program implementation, evaluation questions should address program processes. Helping to create evaluation questions that can be readily understood is an excellent role for stakeholders involved in evaluation planning.

### Sample Evaluation Questions

- What seems to be working?
- What needs to be changed?
- How do we know that the plan has been successful?
- What has the plan accomplished?
- Is the plan making a difference?
- What's the evidence that the plan is working?
- How should it be done differently next time?

### Revisit the Evaluation Plan: Stop. Consider. Decide.

Evaluation plans are expected to be dynamic documents, not to be ignored or forgotten once implementation begins. As planning unfolds, staff and stakeholders might need to revisit the evaluation plan to add, delete, or modify components or make other necessary changes. Once data are collected, analysed, and interpreted, fresh perspectives may trigger a cascade of new evaluation questions. When this occurs, consider whether the new information needs to be added to the current evaluation or if further exploration can be included in a future evaluation of the plan; keep the focus on what needs to be known now instead of what would be nice to know later. Evaluation takes time and resources. If evaluation results are not used, then the efforts that went into their planning and implementation may be wasted.

## Learning Unit 6: Systematic Approach to Training (SAT)

### Objective (s)

The objective of this learning unit is to equip the participants with basic knowledge and skills about the key issues to be addressed in the course of designing a training intervention/programme

This Learning Unit has four sessions:

- Session 1: Assessing Training Needs
- Session 2: Defining Training Aim and Objectives
- Session 3: Deciding the content, methodology and resource persons
- Session 4: Deciding the monitoring and evaluation indicators and processes

**Estimated time:** 6 hours

### Expected Outcome

Participants are able to effectively adapt the base sub module of this training module for training resource persons or organising direct training programmes.

## Session 6.1: Systematic Approach to Training (SAT) and Assessing Training Needs

**Duration:** 90 minutes (1.5 minutes)

### Objectives

At the end of the session, the participants will be able to:

- Explain the systematic approach to training (SAT)
- Articulate the relevance of training needs assessment
- Undertake training needs assessment exercise

### Methods

- Brainstorming
- Group work
- Presentation and discussion in the plenary

### Materials needed

Flip charts, markers, hand outs

### Handouts:

Handout 7: Systematic Approach to training

Handout 8: Capacity Needs and Training Needs Assessment

## **Session Plan and Facilitator Notes**

### **Starting the Session (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes including a brief overview of the overall flow of the session.

### **Brainstorming (40 minutes)**

Initiate a quick brainstorming on capacity needs in general and training needs in particular. Ask them to give some examples of both capacity and training needs.

Make a free list of all the examples shared by the participants by recording them on a flip chart with the help of volunteers from among the participants. Get all the points grouped in three categories of knowledge, skills and attitude.

Conclude the brainstorming by highlighting the notion of gap in current and desired levels of knowledge, skills and attitude to undertake a task and achieve a pre-specified goal. It is important to underline that training gaps and needs are a sub-set of larger capacity gaps that a target group may be having.

### **Group work 13(40 minutes)**

Distribute cards to all the participants and request them to write about their experience and learning related to assessing training needs, if any, or their ideas about training needs assessment as a trainer. Ask them to write it out in bullet points than sentences. Give 10 minutes for this individual exercise.

After the card exercise is done by the participants, ask them to share it in the plenary. Wrap this up in 10 minutes by inviting those who want to share. Ask each of the willing ones to share ideas which are not shared by others. If more people want to share than can be accommodated in 10 minutes, ask them to paste all the cards on the wall for everyone to see and discuss. Cards will have to be placed in knowledge, skills and attitude (KSA) categories as would have emerged during the initial few sharing sessions.

### **Summing up (5 minutes)**

Summarise the key learning points from the session.

## Technical Notes

Training needs are a sub-set of larger capacity needs. Training needs are essentially learning needs that can be addressed through a training intervention. Training works on knowledge, skills and attitude of people that form a part of the human capacity. Other dimensions of capacity include infrastructure, policy, institutions, strategy, structure and culture, which often call for non-training solutions to capacity gaps related to these dimensions.

It is universally agreed that an effective training intervention has to be based on identified training needs. It is also recognised that participatory assessment involving active participation of those whose needs are being assessed and identified is crucial to a fair assessment of the training needs. As training is a time and cost intensive activity, identified needs have to be prioritised in order to make sure that training targets only most important and relevant needs so as to achieve maximum focus and impact.

Moreover, training needs have to be identified and articulated in view of the assigned roles and responsibilities of the functionaries whose needs are being identified. It is quite likely that roles of some functionaries are not clearly defined and communicated and what they do in their work situation is largely determined by established norms, conventions and practices. In a situation like this these norms and practices have to be mapped out in order to identify the capacity gap areas in general and training needs in particular.

As training needs relate to knowledge, skills and attitude, identified training needs have to be grouped in these three categories. This helps in firming up the overall orientation of the training program. While there are usually inputs related to all the three categories of knowledge, skills and attitude in a training program, one of them or a couple of them could constitute the focus of the training to be imparted.

Training needs often help determine the training objectives, but the reverse could also be true in certain cases. It is possible that training objectives are defined in advance and needs assessment exercise is carried out in view of certain pre-agreed objectives.

Training needs could be prioritised in the following manner:

### Format for Prioritisation of Training Needs

| Capacity Need                                    | Training Need                            | Knowledge                                                | Skill                                                                      | Attitude                                                    |
|--------------------------------------------------|------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------|
| Example: Lack of informed participatory planning | How to facilitate participatory planning | Basic principles and processes of participatory planning | How to use available methods and tools to engage in participatory planning | Making the planning process participatory and community led |
|                                                  |                                          |                                                          |                                                                            |                                                             |
|                                                  |                                          |                                                          |                                                                            |                                                             |
|                                                  |                                          |                                                          |                                                                            |                                                             |

**Key Learning Points**

- Training needs are a sub-set of larger capacity needs.
- Effective training intervention has to be based on identified training needs.
- Training needs have to be identified and articulated in view of the assigned roles and responsibilities of the functionaries whose needs are being identified.
- Training needs often help determine the training objectives

## Session 6.2: Defining Training Aim and Objectives

**Duration:** 90 minutes

**Objectives:** At the end of the session, the participants will be able to:

- Articulate the role and relevance of defining training aim and objectives
- Define training aim and objectives of the adapted base sub module for resource persons and direct training programmes.

**Methods:**

- Individual exercise
- Group work
- Group presentation and discussion in the plenary
- Summing up

**Materials needed:**

Flip charts, markers, hand outs

**Handouts:**

Handout 9: Training/Behavioural Objectives: Verbs to Describe Complexity Of Behaviour

## **Session Plan with Facilitator Notes**

### **Starting the Session (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Individual exercise (20 minutes)**

Distribute flash cards to all the participants and ask them to write out the aim and objectives of the base sub module that they attended over last three days. Ask them to read it out to the entire group and post the written cards on the space provided for the purpose.

### **Group work 14 (30 minutes)**

Ask the working groups of the needs assessment exercise to define the training aim and objectives in the light of identified training needs in the previous sessions. Underline that aim and objectives have to be SMART meaning: specific, measurable, attainable, realistic and time bound

Share the design of the base sub module of this training module and ask them to critically examine the aim and objectives of the base sub module that they have received over last 3 days in the light of their own immediate experience as a participant. Ask them to share their ideas and insights in the plenary.

### **Group presentation and discussion in the plenary (30 minutes)**

Ask all the working groups to make their respective presentations in the plenary. Follow it up with an open house discussion on the subject.

### **Summarise the key learning (5 minutes)**

## Technical Notes

Defining training aim and objectives is the key to a sound training design and its subsequent delivery strategy. Aim refers to the overall goal that a training intervention seeks to achieve. Objectives are more specific outputs and outcomes that are sought to be achieved through a training exercise. Clarity in objectives helps in doing a smart and sharp training design. Objectives have to be SMART; meaning specific, measurable, attainable, realistic and time bound.

Training needs identified in terms of specific gaps in knowledge, skills and attitude form the basis for different types of training objectives. Objectives have to be written in terms of expected action outcomes that a training intervention is intended to lead to. Thus, training objectives are often written in terms of what the trained person would be able to do at the end of the training program.

In the process of finalising the aim and objectives of a training programme, the following three types of objectives have to be defined:

**Training objectives (TOs):** TOs refer to the immediate outcomes of a training programme that can be ascertained at the end of the programme evaluation using structured or semi-structured questionnaire and feedback forms.

**Performance objectives (POs):** POs refer to the visible change in the work behaviour of the trained personnel in her/his real work environment, following training. This can be found out through qualitative investigation methods such as interviews and discussions after some lapse of time post training, preferably during a period of 6-12 months after training.

**Enabling objectives (EOs):** EOs refer to the specific expected outcomes of different sessions across different modules, learning units or events. These can be verified through formal or informal feedback sessions at the end of each session. Feedback forms could also be used to assess whether enabling objectives of a particular session are achieved.

It is important to understand that defining the different kinds of objectives at the very outset can help the trainers and facilitators maintain the focus and orientation of the training programme in the right direction. This is also of great help in selecting the right resource persons for different sessions and in choosing the appropriate training method for different topics and themes.

### Key Learning Points

- Defining training aim and objectives is the key to a sound training design and its subsequent delivery strategy.
- Objectives have to be written in terms of expected action outcomes that a training intervention is intended to lead to.
- Defining the different kinds of objectives at the very outset can help the trainers and facilitators maintain the focus and orientation of the training programme.

## Session 6.3: Deciding the content, methodology and resource persons

**Duration:** 90 minutes (1.5 hours)

**Objective:** At the end of the session, the participants will be able to decide the content, methodology and resource persons for the training programs.

**Methods:**

- Group work
- Presentation and discussion in the plenary
- Summing up

**Materials needed:**

Flip charts, markers

## **Session Plan with Facilitation Notes**

### **Starting the Session (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Group work 15 (40 minutes)**

Ask the working groups to re-assemble to decide on the content, methodology and resource persons. Based on the training needs identified and the aim and objectives of the training programme agreed, the working groups will be required to list out the topics and themes that are proposed to be covered during the training programme.

Methods have to be decided on the basis of the principles of adult learning as applied to specific themes and contexts. Methods such as brainstorming, experience sharing, group work, presentation and discussion, case studies and good and best practices provide a lot of room for participatory and interactive learning.

Selection of resource persons should be not on the basis of who is available, but on the basis of the experience and expertise required to do justice to the chosen topics and themes in terms of inducing the desired learning.

### **Presentation and discussion in the plenary (40 minutes)**

Ask the working groups to make their respective presentations in the plenary. Follow it up with an open house discussion to sharpen the understanding on the ways to decide on the contents, methods and resource persons.

### **Summing up (5 minutes)**

Summarise the key learning from the session.

## Technical Notes

Agreed objectives of the training dictate the content and methodology to be adopted to deliver the content. Content is basically the themes and topics related to the chosen subject matter.

As adults learn more from experience, content has to be delivered using methods of experiential learning. This could involve brainstorming, experience sharing, exploratory discussions, case studies, and role plays.

Resource persons need to be selected on the basis of two key criteria: one, their domain knowledge and expertise; two, their training and facilitation skills.

### Key Learning Points

- Methodology of the training should be decided on the basis of the principles of adult learning as applied to specific themes and contexts.
- Selection of resource persons should be not on the basis of who is available, but on the basis of the experience and expertise required to do justice to the chosen topics and themes in terms of inducing the desired learning.

## Session 6.4: Deciding the monitoring and evaluation indicators and processes

**Duration:** 90 minutes

**Session Objectives:** At the end of the session, the participants will be able to:

- Articulate the relevance of developing monitoring and evaluation indicators
- Describe the process and method of develop monitoring and evaluation indicators.

**Methods:**

- Interactive lecture presentation
- Group work
- Presentation and discussion in the plenary
- Summing up

**Materials needed**

Flip charts, markers

## **Session Plan**

### **Starting the Session (5 min)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Interactive Lecture Presentation (25 min)**

One way to begin this is to initiate a discussion on the role of monitoring and evaluation indicators in assessing the efficacy of the training interventions designed and delivered.

Indicators, as objectively verifiable measures of change, can tell about the changes taking place as a result of the training imparted. Sharper the indicator, sharper will be the understanding of the changes taking place.

A good indicator is the one that can capture a lot of qualitative information and feedback within a single measurable change. For example, 'the number of participants that have been able to successfully adapt and deliver the base sub module for training resource persons' contains the following qualitative information:

- Capacity of the participants in terms of their knowledge and skills to design and deliver training programme has increased.
- Understanding of the participants on DRR/CCA mainstreaming issues and challenges is of an advanced level.
- Participants are keen to volunteer their time and effort to organise downstream training programmes as proposed and planned

Differences between monitoring and learning indicators have to be highlighted and explained.

### **Group work 16 (30 min)**

Ask the working groups to develop a set of monitoring and learning indicators for the adapted base sub module.

### **Presentation and discussion in the plenary (25 min)**

Ask the working groups to make their respective presentations in the plenary. Follow it up with an open house discussion to sharpen the understanding of the key points involved.

### **Summing up (5 min)**

Summarise the key learning from the session

## Technical Notes

Monitoring and evaluation are often the weakest links in most of the training interventions. It is generally hard to know the outcomes of a training program other than the ones focussed on some specific skills like cooking and driving, which primarily involve motor skills.

It is important to have a robust monitoring and evaluation system in place in order to track the efficacy of the training intervention being designed and delivered. This helps ensure the effectiveness of the training both in terms of the quality of process and outcomes achieved.

Indicators are objectively verifiable measures of change. These indicators are generally related to processes, inputs, outputs, outcomes, and impact. Monitoring as a concurrent exercise in learning during the life cycle of an intervention is generally about process, input and output indicators. Evaluation which is a periodic (mid-term, end term and post intervention) exercise in learning about an intervention requires outcome and impact indicators.

Indicators have to be sharp and SMART meaning: specific, measurable, attainable, realistic and time bound. Sharpness of the indicator lies in its inherent capacity to contain not only quantitative, but also qualitative information in one single indicator.

Identification of these indicators in advance and their use and application to generate the required data has to be built in into the training design and delivery.

### Key Learning Points

- Monitoring and evaluation need to be built into training intervention in order to make them more effective.
- Indicators for monitoring and evaluation are objectively verifiable measures of change
- Indicators may relate to processes, inputs, outputs, outcomes and impact.
- Indicators have to be specific, measurable, attainable, realistic and time bound.

## Learning Unit 7: Learning and Facilitation Skills

### Objective:

The objective of this learning unit is to equip the participants with basic learning and facilitation skills that help the trainers conduct training/learning sessions with efficiency and effectiveness.

### Sessions:

- Art of facilitation I
- Art of facilitation II
- Sharing, Listening and Learning
- Learning to listen and listening to learn

**Estimated time:** 5 hours

### Expected outcome

Participants are able to practice learning and facilitation skills effectively.

## Session 7.1: Art of Facilitation I

**Duration:** 90 minutes (1.5 hours)

**Objectives:**

- Articulate the importance of understanding self and others for effective facilitation
- Articulate ways to promote trust and sharing between the participants and the facilitator
- Use active listening as a key facilitation strategy

**Methods:**

- Individual exercise
- Group work
- Presentation and discussion in the plenary
- Summing up

**Materials needed:**

Flip charts, markers, hand outs

**Handouts:**

Handout 10: Johari Window

Handout 11: Stephen Covey's seven habits of highly effective people

## **Session Plan with Facilitation Skills**

### **Starting the Session (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Individual exercise (20 minutes)**

The individual exercise is designed to trigger experiential learning about the concepts of self, self-image and self-esteem. Distribute cards to participants and ask each participant to write one sentence about herself/himself (that s/he thinks describes her/him the best) on the card provided for the purpose. Invite those willing to share with others in the plenary.

What they share would mostly be about what they think who they are. Idea and description of who they are is their self-image. How they feel about themselves constitutes their self-esteem. High self-esteem means that the person generally feels good about oneself and others. Low self-esteem means that the person generally does not feel so good about oneself and others. Having high self-esteem is a primary pre-condition for being an effective trainer and facilitator. A person with low self-esteem is bound to be a poor facilitator.

After this individual exercise, as a part of the summing up, the facilitator should present the Johari Window to explain the ways to understand oneself and develop a critical awareness about oneself as a person and facilitator.

### **Group work 17(30 minutes)**

The group work is designed to promote an experiential learning about the ways to work on sharpening one's facilitation skills. Ask people to engage in a group discussion within their respective groups about the skills and attitude of an effective trainer and facilitator for presentations in the plenary.

### **Presentations and Discussion in the plenary (30 minutes)**

Ask the working groups to make their respective presentations in the plenary. Follow it up with an open house discussion.

### **Summing up (5 minutes)**

Summarise the key learning from the session and present the key points from Stephen Covey's seven habits of highly effective people, which can help enhance the facilitation orientation and skills of the participants.

## Technical Notes

Having an intuitive and fair understanding of self and others is the key to the art of facilitation. Understanding self involves an awareness of one's own strengths and weaknesses, hopes and fears, and values, assumptions, needs and interests (VANI). Understanding others is being aware of their values, attitudes, needs and expectations (VANE).

Johari Window and Seven Habits of Highly Effective People will constitute the core of this session and will aim at creating an enhanced awareness of one's self and others among the participants.

An improved understanding of the self and others forms the basis for a relationship of trust and sharing between the facilitator and the learner.

Listening is the basic skill required for understanding self and others on the one hand and for promoting trust and sharing on the other. Listening has to be active and empathetic and not passive and sympathetic.

Active listening means listening with an active interest in learning and empathetic listening means listening from the point of view of the speaker and not the listener's.

### Key Learning Points

- Knowing self and others is the key to being an effective facilitator.
- An improved understanding of the self and others forms the basis for a relationship of trust and sharing between the facilitator and the learner.
- Listening is the basic skill required for understanding self and others on the one hand for promoting trust and sharing on the other.
- 'Learning to listen and listening to learn' is the hallmark of an effective facilitator

## Session 7.2: Art of Facilitation II

**Duration:** 90 minutes

**Objectives:**

- handle questions
- manage expectations
- manage conflicts
- nurture the eco-system of learning

**Methods:**

- Interactive lecture presentation
- Role play

**Materials needed**

Flip charts, markers

## **Session Plan**

### **Starting the Session (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Interactive Lecture Presentation (20 minutes)**

Begin the presentation with a set of key questions by way of illustration. Illustrative questions should be able to demonstrate how questions are the key to learning. Hence, raising and handling questions is the most critical activity in the process of learning and facilitation of learning.

After the art of asking and answering questions is covered, the facilitator should move on to the knowledge and skills related to managing expectations and conflicts.

The presentation should end with pointers for nurturing the eco-system of learning as a part of the art of facilitation.

### **Role Play (60 minutes)**

This role play aims at promoting experiential learning on the art of handling questions, and managing expectations and conflicts. In order to ensure maximum participation, this could be organised as two or more different role plays.

Divide the group of participants into facilitators, learners, observes. Ask the facilitator group of 2-3 members to plan a session on a theme of their choice. Brief the group of learners to ask difficult questions, express high expectations from the session and voice conflicting opinions and views on the theme chosen. Group observers are briefed about observing the entire process carefully and document it without any bias and with total objectivity and fairness.

At the end of the role play/s, ask the observer group to share their observations in the plenary. Ask the other groups to respond, ask questions and offer clarifications.

### **Summing up (5 minutes)**

Summarise the key learning from the session.

## Technical Notes

Questions are the key to learning. They are the basic tools of inquiry to generate learning in any field. Hence, it is important to encourage the participants to ask questions and respond to those questions with honesty and understanding. Questions are generally of the following four types:

- Questions for seeking information or/and clarification
- Questions for showing that one knows more than others
- Questions for simply asking questions, in other words for registering one's presence
- Questions for making a serious inquiry and learning

Handling questions in a manner that maximises learning for all is a key facilitation skill. This involves appreciating the true nature and intent of the question being asked to begin with. Questions can be answered immediately or later at the end of the session as decided by the facilitator with or without consultation with the participants as required.

All questions need not be answered by the facilitator. It is a good strategy to ask other participants if they would like to respond to the questions posed by someone from amongst them. Many a time the questions will satisfactorily get answered by someone from among the participants themselves. This not only promotes participation and interactive learning, but provides more opportunity to the facilitator to understand the gaps in learning and address them effectively without being didactic.

Managing expectations is an aspect that is often missed out by the facilitators. Expectations need to be managed in time and well, as unmet expectations can hamper and block learning. Hence, it is important to identify and address expectations of the participant's right at the outset of the training program. Expectations of the participants could be vast and varied and it may not be possible to meet all the expectations given the scope and design of the training program. It is good to tell the participants upfront about what part of their expectations are going to be addressed during the program and how and what part of the expectations are not going to be addressed and why not.

Conflicts of ideas, views and interests are bound to crop up during different training sessions, especially when the participants are coming from a diverse background with diverse needs and interests. Managing conflicts well and in time is crucial to creating a healthy eco-system of learning. Conflicts in themselves are not necessarily unhealthy. They are often opportunities for new and unintended learning, as they help surface varying perceptions, perspectives, ideas, views and opinions on theme/s under discussion. Hence, conflicts can also be seen and approached as opportunities for learning and change.

All the preceding topics related to handling questions and managing expectations and conflicts will logically lead to the closing topic of nurturing the eco-system of learning. Major success of the trainer/facilitator lies in creating a favourable climate for learning for all the participants. This can be achieved only by making everyone feel that they are active participants in and contributors to the process of learning.

### **Key Learning Points**

- Questions are the key to learning. They are the basic tools of inquiry to generate learning in any field. Hence, it is important to encourage the participants to ask questions and respond to those questions with honesty and understanding.
- Handling questions in a manner that maximises learning for all is a key facilitation skill. This involves appreciating the true nature and intent of the question being asked to begin with.
- Managing expectations is an aspect that is often missed out by the facilitators. Expectations need to be managed in time and well, as unmet expectations can hamper and block learning.
- Managing conflicts well and in time is crucial to creating a healthy eco-system of learning.
- Major success of the trainer/facilitator lies in creating a favourable climate for learning for all the participants.

## Session 7.3: Sharing, Listening and Learning

**Duration:** 60 minutes (1 hour)

**Objective(s):** Create a learning event and environment open to sharing, listening and learning.

**Methods:**

- Experience sharing
- Group exercise
- Summing up
- Interactive lecture presentation

**Materials needed:**

Flip charts, markers

## **Session Plan with Facilitation Notes**

### **Starting the Session (5 minutes)**

Explain the purpose and process of the session and its intended learning outcomes.

### **Experience sharing (20 minutes)**

Ask the working groups to share their experiences as a trainer and facilitator in the past including what they learnt from those experiences and how they applied that learning in their subsequent training and facilitation work.

Draw the major learning from these experiences and highlight the amount and quality of learning that have taken place as a result of this sharing.

Discuss the role of listening in this sharing and learning and highlight the role of active listening as the most significant facilitation skill.

### **Group exercise 18 (20 minutes)**

Ask for 5 volunteers from among the participants. Ask 4 of the 5 volunteers to go out of the training hall and wait for their names to be called. After they have left the hall, tell a message of 3-4 sentences to the only remaining volunteer in the training hall.

This could be as follows: 'Tomorrow there is a solar eclipse. All of you are requested to assemble in the parade ground to witness this rare phenomenon. In case it rains, we will meet in the auditorium where an eminent scientist will give us lecture presentation on the subject.'

Invite one of the 4 volunteers into the hall and ask the first one to tell her/him the message that you have told her/him. In the next round, the second volunteer will pass on the received message to the third volunteer. This will go on till the 5<sup>th</sup> volunteer has shared the received message with the entire group.

This group exercise invariably results in the last message delivered to be very different from the original message shared. This results in experiential learning about how we all listen selectively and establishes the need to work on learning so as to engage in active and maximum listening.

### **Interactive Lecture Presentation (15 minutes)**

Present the role of sharing in learning and the role of active listening in learning as a key feature of the art of facilitation. Summarise the key learning from the session

## Technical Notes

Training professionals entails a situation of adult learning. Adults learn through experience and their learning is determined by the nature of their values, attitudes, needs and interests (VANI). Experience sharing offers an opportunity for the participants to look at and examine their experience with the intention to learn from it. A structured and well facilitated experience sharing session can result in a lot of significant and practical learning.

Listening without judging and interpreting promotes learning. It is important for the facilitator and learner to recognise that it is in their mutual benefit not to judge each other and be open to learning from each other's experiences.

Experience sharing and learning accompanied with critical reflection is expected to result in learning about new ideas and insights that can help achieve not only the enabling objectives of different sessions during the training program but also the training and performance objectives of different learning units and the overall training program.

Major responsibility of the facilitator is to create a learning event and environment. Each session has to be designed and delivered as a veritable learning event for all concerned. A learning environment is an essential attribute of a learning event and refers to an environment where everyone is willing to share their experiences, engage in a critical reflection in the light of new information, ideas and insights and learn from each other in an atmosphere of mutual trust, respect and understanding. Creating this kind of an environment at the very outset and maintaining it throughout the duration of the training event is essential for the success of the training program.

### Key Learning Points

- Adults learn through experience and their learning is determined by the nature of their values, attitudes, needs and interests (VANI).
- Listening without judging and interpreting promotes learning. It is important for the facilitator and learner to recognise that it is in their mutual benefit not to judge each other and be open to learning from each other's experiences.
- Experience sharing and learning accompanied with critical reflection is expected to result in learning about new ideas and insights that can help achieve not only the enabling objectives of different sessions during the training program but also the training and performance objectives of different Learning Units and the overall training program.
- Major responsibility of the facilitator is to create a learning event and environment. A learning environment is an essential attribute of a learning event and refers to an environment where everyone is willing to share their experiences, engage in a critical reflection in the light of new information, ideas and insights and learn from each other in an atmosphere of mutual trust, respect and understanding.

## Session 7.4: Learning to listen and listening to learn

**Duration:** 60 minutes (1 hour)

**Objective:** Articulate the importance of receiving and giving feedback; consolidating learning.

**Methods:**

- Interactive Learning Presentation
- Role play
- Summing up

**Materials needed:**

Flip charts, markers

## **Session Plan with Facilitator Notes**

### **Introduction (5 minutes)**

Explain the purpose and process of this session and its intended learning outcomes.

### **Interactive Presentation (15 minutes)**

The facilitator should present the conceptual framework underlying different learning styles of adults and their relative merits and limitations. It will be good to administer individual and group exercises that can bring this out at an experiential level in the following session.

As adults learn through observation, reflection and action and are trained to talk more than listen, this often comes as a handicap in the process of effective facilitation. Encourage the participants to ask questions and share their experiences related to gaps in listening leading to disruption or/and distortion in inter-personal communication.

### **Role play (25 minutes)**

Ask a couple of volunteers from among the participants to organise impromptu sessions on training themes of her/his choice. Keep the session by the volunteers of not more than 5 minutes with additional 5 minutes for preparation.

After the session by the volunteers, ask other participants to share what they listened to and what they have learnt from the session. And have a discussion for about 10 minutes.

### **Consolidation of learning (15 minutes)**

This will be the final wrap-up session organised at the end of the TOT sub module, which also happens to be the end of the training module. This must summarise all the key learning from the entire module.

## Technical Notes

Listening is caring and learning to listen is learning to care. Listening takes place not only at the level of words, but also and more so at the level of feelings and emotions. Values, attitudes, needs and expectations (VANE) of participants with varied and diverse backgrounds is also a major determinant in how one listens and with what effect.

Learning is expanding the boundaries of knowledge and understanding. Listening to learn is to look for information, ideas and insights that can help expand the boundaries of knowledge and understanding. This requires appropriate orientation and training.

Most of the conventional training on communication focuses on talking than listening. This session seeks to underline the seminal significance of listening in communication and learning.

Receiving and giving feedback is an important site and occasion for listening and learning. Everyone likes good feedback and dislikes bad feedback. This is a part of human nature. People like to hear good and not bad things about themselves. But those who want to learn for making improvements in their work behaviour have to learn the art of receiving and giving feedback.

While giving feedback is a lot easier, receiving feedback calls for openness and a willingness to learn about one's own gaps and weaknesses. The best way to give feedback is to share good and encouraging feedback first. Feedback that points to gaps and shortcomings should be presented in the form of suggestions for improvement in order to make them less offensive and relatively more user friendly. Receiving both positive and negative feedback calls for a lot of trust, understanding, and courage. While it is important to receive positive feedback with humility, it is all the more important to receive negative feedback with openness and willingness to learn from others about one's own weaknesses in order to make efforts to remove them for improved performance and results.

It is the primary responsibility of the facilitator to consolidate learning at the end of each specific session, Learning Unit and event in order to make sure that all the agreed enabling, training and performance objectives are being achieved as intended.

### Key Learning Points

- Listening is caring and learning to listen is learning to care.
- Learning is expanding the boundaries of knowledge and understanding. Listening to learn is to look for information, ideas and insights that can help expand the boundaries of knowledge and understanding.
- Receiving and giving feedback is an important site and occasion for listening and learning.

## Annexure 1: Evaluation Forms

### **Evaluation Form for Sessions:**

Please indicate your level of agreement with the statements listed below:

| Statements                                          | Strongly Agree | Agree | Disagree | Strongly Disagree |
|-----------------------------------------------------|----------------|-------|----------|-------------------|
| The Objectives of the session were clearly defined. |                |       |          |                   |
| Topics covered were relevant to me.                 |                |       |          |                   |
| The content was organised and easy.                 |                |       |          |                   |
| The materials distributed were helpful.             |                |       |          |                   |
| Instructions were clear and understandable.         |                |       |          |                   |
| The presentation was effective.                     |                |       |          |                   |

1. What did you learn during this session that you anticipate using in your work?
2. Was there anything you did not understand during this session? Please provide specific examples.
3. Please provide feedback for the trainer.

### **Evaluation Form for Module:**

Please indicate your level of agreement with the statements listed below:

| Statements                                                               | Strongly Agree | Agree | Disagree | Strongly Disagree |
|--------------------------------------------------------------------------|----------------|-------|----------|-------------------|
| I was personally interested in taking this training.                     |                |       |          |                   |
| I had the necessary prerequisite knowledge for completing this training. |                |       |          |                   |
| Training was relevant to my needs.                                       |                |       |          |                   |
| The time allotted for each session and whole training was sufficient.    |                |       |          |                   |

1. How will this training benefit you at your workplace?
2. Things that you learned from this training are
3. How do you rate the training overall?
  - Excellent
  - Good
  - Average
  - Poor
4. What aspects of the training could be improved?

## Annexure 2: Hand-outs

### Handout 1: Basic terms of disaster risk reduction (DRR), UNISDR (2009)

**Acceptable risk:** The level of potential losses that a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions.

**Adaptation:** The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

**Biological hazard:** Process or phenomenon of organic origin or conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

**Building code:** A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage.

**Capacity:** The combination of all the strengths, attributes and resources available within a community, society or organisation that can be used to achieve agreed goals.

**Capacity Development:** The process by which people, organisations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions.

**Climate change:** (a) The Inter-governmental Panel on Climate Change (IPCC) defines climate change as: —a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcing or to persistent anthropogenic changes in the composition of the atmosphere or in land use||.

(b) The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as —a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

**Contingency planning:** A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.

**Coping capacity:** The ability of people, organisations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters.

**Critical facilities:** The primary physical structures, technical facilities and systems which are socially, economically or operationally essential to the functioning of a society or

community, both in routine circumstances and in the extreme circumstances of an emergency.

**Disaster** A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

**Disaster risk:** The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

**Disaster risk management:** The systematic process of using administrative directives, organisations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

**Disaster risk reduction:** The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

**Early warning system:** The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organisations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

**Ecosystem services:** The benefits that people and communities obtain from ecosystems.

**El Niño-Southern Oscillation phenomenon:** A complex interaction of the tropical Pacific Ocean and the global atmosphere that results in irregularly occurring episodes of changed ocean and weather patterns in many parts of the world, often with significant impacts over many months, such as altered marine habitats, rainfall changes, floods, droughts, and changes in storm patterns.

**Emergency management:** The organisation and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.

**Emergency services:** The set of specialised agencies that have specific responsibilities and objectives in serving and protecting people and property in emergency situations.

**Environmental degradation:** The reduction of the capacity of the environment to meet social and ecological objectives and needs.

**Environmental impact assessment:** Process by which the environmental consequences of a proposed project or programme are evaluated, undertaken as an integral part of planning and decision-making processes with a view to limiting or reducing the adverse impacts of the project or programme.

**Exposure** People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses.

**Forecast** Definite statement or statistical estimate of the likely occurrence of a future event or conditions for a specific area.

**Geological hazard:** Geological process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

**Greenhouse gases:** Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation of thermal infrared radiation emitted by the Earth's surface, the atmosphere itself, and by clouds.

**Hazard:** A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

**Hydro meteorological hazard:** Process or phenomenon of atmospheric, hydrological or oceanographic nature that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

**Land-use planning:** The process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long term economic, social and environmental objectives and the implications for different communities and interest groups, and the subsequent formulation and promulgation of plans that describe the permitted or acceptable uses.

**Mitigation:** The lessening or limitation of the adverse impacts of hazards and related disasters.

**National platform for disaster risk reduction:** A generic term for national mechanisms for coordination and policy guidance on disaster risk reduction that are multi-sectoral and interdisciplinary in nature, with public, private and civil society participation involving all concerned entities within a country.

**Natural hazard:** Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

**Preparedness:** The knowledge and capacities developed by governments, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.

**Prevention** The outright avoidance of adverse impacts of hazards and related disasters.

**Public awareness** The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.

**Recovery:** The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.

**Residual risk:** The risk that remains in unmanaged form, even when effective disaster risk reduction measures are in place, and for which emergency response and recovery capacities must be maintained.

**Resilience:** The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

**Response:** The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduces health impacts, ensures public safety and meets the basic subsistence needs of the people affected.

**Retrofitting:** Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards.

**Risk:** The combination of the probability of an event and its negative consequences.

**Risk assessment:** A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.

**Risk management** The systematic approach and practice of managing uncertainty to minimise potential harm and loss.

**Risk transfer** The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party.

**Socio-natural hazard:** The phenomenon of increased occurrence of certain geophysical and hydro meteorological hazard events, such as landslides, flooding, land subsidence and drought that arise from the interaction of natural hazards with overexploited or degraded land and environmental resources.

**Structural measures:** Any physical construction to reduce or avoid possible impacts of hazards, or application of engineering techniques to achieve hazard-resistance and resilience in structures or systems;

**Non-structural measures:** Any measure not involving physical construction that uses knowledge, practice or agreement to reduce risks and impacts, in particular through policies and laws, public awareness raising, training and education.

**Sustainable development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

**Technological hazard:** A hazard originating from technological or industrial conditions, including accidents, dangerous procedures, infrastructure failures or specific human activities, that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

**Vulnerability:** The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

## Handout 2: Case Study: Awareness triggers action at a major public hospital

Nepal is highly prone to disasters, particularly to earthquakes, which claimed more than 11,000 lives in the 20th century alone. Data suggest that earthquakes of the magnitude of the Great Bihar Earthquake in 1934 occur approximately every 75 years and although this is only a statistical estimate, a devastating earthquake is inevitable in the long run and likely in the near future. This is particularly troublesome because the Kathmandu Valley Earthquake Risk Management Action Plan suggests that as many as 60 per cent of buildings in the area are likely to be heavily damaged if the ground motion of the 1934 earthquake is repeated today.

How would Nepal's health services cope with such an event? To find out, an earthquake mass casualty scenario was used for Kathmandu Valley to estimate the number of people that would require hospital services, based on: (1) expected damage to buildings; (2) a one-to-five ratio of deaths to injuries; and (3) the Kathmandu Valley's population of 1.5 million (in 2002). The estimates ranged as high as 22,500 dead (up to 1.5 per cent of the population), with up to 112,500 injured. Even the best of health systems would be hard pressed to deal with this scale of injury. And in the most severe intensity earthquakes, chances are that even the combined capacity of all emergency departments in Kathmandu Valley would only be able to serve a fraction of those requiring care. The limited number of patient beds and the fact that hospitals would be damaged, unable to function or even collapsed are aggravating factors that would put thousands of patients and health workers at risk.

### Action taken

Recognising the gap between current hospital capacity and predicted medical needs in a post-earthquake scenario, a seismic assessment of 14 hospitals was conducted in 2001 in Kathmandu Valley, including Patan Hospital. Subsequently, Patan was one of four priority hospitals to undergo a more rigorous study. Unlike most other hospitals in Nepal, Patan Hospital's earthquake resilience was considered relatively good. Nonetheless, it was almost a foregone conclusion that a major earthquake would leave the hospital unable to function due to structural and non-structural damage. Therefore, the study recommended a detailed structural analysis to assess how the hospital would fare during high-intensity earthquakes. It also called for backup generators with an adequate fuel supply to provide an uninterrupted supply of electricity if external power is interrupted, response scenarios that simulate handling at least 200 casualties (the potential consequences of mid-scale earthquakes) and plans and procedures that contemplate a hospital that has been out of service.

Hospitals are more than concrete blocks and steel beams. They are made up of people and services and systems, all of which go into making a safe hospital. Patan Hospital was one of the first hospitals in Nepal to develop a hospital emergency plan, and so it is not surprising that it became one of the first health facilities to take part in a mass casualty mock drill. Civil society organisations and health officials worked together in a simulated rescue chain, from incident site to emergency ward, thus strengthening the links between community and hospital, including the critical pre-hospital response. Equally important, the mock drill created awareness of the need for mass casualty management in host communities and

among community-based organisations. Since that first drill in 2002, Patan Hospital has conducted annual drills to test and refine its emergency plan.

Patan Hospital has also taken measures to reduce seismic risk. The hospital abandoned its original plan to expand the maternity wing by adding an extra floor to existing buildings when the roof was deemed structurally too weak to carry the extra load during earthquake ground motion. Instead, a new maternity wing is being built as a separate structure, in compliance with earthquake-resistant standards. The new maternity wing will be completed next year and will add 120 beds to the present 320 beds. The 2001 assessment included rough cost estimates and plans for priority retrofitting.

Subsequently, Patan Hospital submitted to donors a detailed funding proposal for a comprehensive structural assessment and design drawings needed to accurately estimate the cost of retrofitting existing structures so they would be functional after moderate to severe earthquakes. While the hospital itself made some of the required modifications, they were less successful in securing the needed financial support, pointing to the need to increase awareness of investing in safety measures before disaster events occur rather than undertaking costly rebuilding projects afterwards.

## Handout 3: Case Study: Mexico: How safe is your health facility? The “Hospital Safety Index”

The Disaster Mitigation Advisory Group (DiMAG) is developing a low-cost, easy-to-use tool called “Hospital Safety Index”. This tool will allow countries to quickly measure and rank a health facility’s level of safety, prioritise actions that would improve safety and monitor progress.

How does the Hospital Safety Index work? First, general information is gathered on each facility’s level of complexity, the population it serves, the number of health staff it has, natural hazards prevalent in the area, and disaster history. Evaluators then use a checklist to measure aspects that contribute to the facility’s safety: structural components (load-bearing walls, foundations, columns, etc.), non-structural components (architectural elements such as laboratory equipment, furnishings, ventilation or electrical systems) and organisational/functional elements such as the emergency operations centre, contingency plans, backup systems for water and electricity. Each component’s safety is ranked as high, medium or low, following a series of pre-determined standards. These scores are weighted according to the importance of the aspect being evaluated. A programme automates and standardises the assessment and evaluation phase, reducing bias and lessening the chance of mathematical error.

Applying the Hospital Safety Index takes very little time (several hours) and gives an accurate although general idea of which safety level the facility falls into and what improvement measures are recommended. However, this tool does not replace an in-depth vulnerability assessment conducted by experienced engineers.

Mexico, a large country with more than 3,000 public and private hospitals, offers an interesting example of how this process works. In 2006, Mexico created a “National Committee on Safe Hospitals,” made up of representatives from a variety of institutions such as the Mexican Hospital Association, the Social Security Institute and the Secretary of Health. More than 400 people have been trained to use the Hospital Safety Index, which classifies the hospital’s safety level into categories A, B or C according to a numerical ranking. What does this score mean?

| Hospital Safety Index Score | Necessary Measures                                                                                                                                                                                                                                                 |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C = 0 – 0.35                | Urgent measures must be taken immediately; as the health facility’s current level of safety is insufficient to protect patients and staff during and after a disaster or emergency.                                                                                |
| B = 0.36 – 0.65             | Short-term measures are required, as the health facility’s current level of safety could potentially put patients, staff and the facility’s ability to function at risk during or after a disaster or emergency.                                                   |
| A = 0.66 – 1                | Although it is likely that the hospital will continue to function in emergency situations, it is recommended that measures continue to be taken in the medium and long term to reduce risk and incorporate mitigation measures particularly for structural safety. |

The Index was then applied in more than 100 health facilities, which were determined to be at risk, either because of their geographic location or due to their critical importance in the health network. The results showed that more than 60 per cent of these hospitals were classified as “safe” in terms of structural and non-structural components. However, almost the same percentage was deemed to require improvements in the functional/organisational aspects (disaster planning, organisation, training, critical resources, etc.)

After reviewing the results, the coordinator of the Mexico’s Civil Protection System committed to include “Safe Hospitals” as a national disaster reduction priority, for which he received the backing of the country’s president. Mexico is committed to applying the Hospital Safety Index to all high-risk facilities (slightly over 1,000) in 2007 and to begin the process of certifying those facilities with an “A” rating. In the Caribbean — where a single hospital can be of vital importance, as it may be the only one in a country, additional considerations have been added to the required survey form to measure the degree of disruption to a health facility if the recommendations are implemented, and the cost associated with doing so. Authorities can appreciate at a glance that, with limited funds and minor disruption, their safety score can be improved. Although the Hospital Safety Index is just getting off the ground, it has proved to be a powerful instrument for rallying country support around the issue of safe hospitals. Rating the safety of a health facility (as opposed to focusing on vulnerability) requires striking an appropriate balance between providing a secure environment for the patients, making health care accessible and factoring in economic considerations. This is a complex process and the Hospital Safety Index is only one of a variety of tools that managers can use to gather the information they need for sound decision making.

## **Handout 4: 10 basic facts to know about keeping hospitals and health facilities safe from disasters:**

### **1.Many factors put hospitals and health facilities at risk:**

- Buildings: The location, design specifications, and resilience of the materials used, all contribute to a hospital's ability to withstand natural hazards.
- Patients: In normal times, health facilities are occupied 24 hours a day by highly vulnerable people, and are often full to capacity. In disaster situations, damage to hospital components compounds patient vulnerability, as well as increasing the number of patients.
- Hospital beds: Disasters often cause the loss of hospital beds, frequently just as the demand for emergency care increases.
- Health workforce: The loss or unavailability of health workers compromises care for the injured. Hiring outside personnel to sustain response capacity adds to the overall economic burden.
- Equipment: Damage to non-structural elements often surpasses the cost of damage to the building. Even less costly damage can still force a hospital to halt operations.
- Basic lifelines and services: A hospital's ability to function relies on lifelines and other basic services such as electrical power, water and sanitation, and waste management and disposal. The loss of even some services can affect the entire health facility.

### **2.Components of a hospital or health facility are typically divided into two categories:**

- Structural elements: those essential elements that determine the overall safety of the system, such as beams, columns, slabs, load-bearing walls, braces or foundations.
- Non-structural elements: all other elements that enable the facility to operate. They include elements such as water heaters or storage tanks, mechanical equipment, shelving and cabinets and lifelines. In the case of hospitals, 80 per cent or more of the total cost of the facility can be the price of non-structural components.

### **3.Functional collapse, not structural damage, is the usual reason for hospitals being put out of service during emergencies:**

Functional collapse occurs when the elements that allow a hospital to operate on a day-to-day basis are unable to perform because the disaster has overloaded the system. These include: architectural spaces such as laboratories or operating theatres; medical records; medical and support services; and administrative processes (such as contracting, procurement, and maintenance routines). Although the measures necessary to prevent a functional collapse (such as contingency planning, improved organisation and staff training) require a significantly smaller financial investment, they nonetheless remain a major challenge.

### **4.Hospitals and health facilities can be built to different levels of protection:**

- Life safety is the minimum level of protection and is the most common approach to protection in the construction of health facilities;
- Investment protection is designed to protect all or part of the infrastructure and equipment, although the facility itself may stop functioning. This level of protection

- ensures that the facility resumes operations within a reasonable timeframe and cost;
- Operations protection, which is the most costly level, includes life and investment protection but also seeks to ensure the facility continues to function after a disaster.

#### **5. Making new hospitals and health facilities safe from disasters is not costly:**

Building a hospital is a significant capital investment. In calculating the cost, one must include both the structure itself and the non-structural elements (non-structural elements account for about 80 percent of the total cost). It has been estimated that the incorporation of mitigation measures into the design and construction of a new hospital will account for less than 4 percent of the total initial investment.

#### **6. Field hospitals are not necessarily the best solution to compensate for the loss of a hospital or health facility:**

Field hospitals have been used successfully in complex disasters (civil conflicts and wars), but experience in the aftermath of disasters caused by natural hazards in developing countries has shown these extremely expensive solutions to be not satisfactorily cost-effective.

#### **7. Seeking the right expertise: a check consultant:**

A “check consultant” is an independent consultant who, on behalf of a client, ensures that norms and building standards are in place. Check consultants can be contracted to oversee the construction of any building, but their thorough knowledge of building codes and natural hazard mitigation measures are particularly important to ensuring the disaster safety of critical facilities such as hospitals.

#### **8. Building codes are of utmost importance:**

One of the earliest mentions of the importance of building codes is found in Hammurabi’s Code:

- 232: “... he [the builder] shall make compensation for all that has been ruined, and inasmuch as he did not construct properly this house which he built and it fell, he shall re-erect the house from his own means.”

#### **9. Creating safe hospitals is as much about having vision and commitment as it is about actual resources:**

The responsibility of creating safe hospitals must be shared among many sectors: planning, finance, public works, urban and land-use planning, together with the health sector. The political will to make this happen must match the knowledge that already exists.

#### **10. *The most costly hospital is the one that fails!***

## Handout 5: Checklist for Hospital Safety

### 1. Square One

- A. Has a disaster planning committee been formed?
- B. Are there representatives from the medical staff (particularly from the emergency department and surgery), nursing, various support services and administration?
- C. Has this committee been charged with overseeing the development of the disaster manual?
- D. Does this committee review and critique disaster drills and evaluate whether changes need to be made to the disaster manual?
- E. Has the Board of Trustees been informed of its responsibilities in the event of a catastrophe to the hospital, and is it willing to delegate certain decision-making to the CEO for expenditure of funds for emergency needs/repairs?

### 2. Address the Threat

- A. Is the area in which your hospital is located susceptible to:
  - 1. Hurricanes?
  - 2. Earthquakes?
  - 3. Cyclones?
  - 4. Nuclear accidents?
  - 5. Physical attacks?
  - 6. Flooding?
  - 7. Chemical spills?
  - 8. Fire?
  - 9. Any Other?
- B. If the answer is YES to any of the above, have you addressed the following?
  - 1. How each disaster will affect the facility?
  - 2. How each disaster will affect the road network surrounding the hospital?
  - 3. How each disaster will affect the staff's personal life (family and homes) and possibilities of housing certain staff within the hospital during the period following the disaster?
  - 4. Types of injuries caused by each disaster.
  - 5. Types of staff, supplies and medication needed for each type of disaster.
  - 6. Additional support needed to react to each disaster.
  - 7. Photographic documentation of building(s) and equipment (pre-disaster).

### 3. Organise Staff

- A. Is there a call-back roster and is it updated frequently? Does the roster include the individual's cellular telephone and beeper numbers, when applicable?
- B. Is there a roster for outside support activities needed during a disaster and

is it updated frequently?

- C. Have personnel responsibilities been defined and a checklist developed for each key position?
- D. Are there rosters of personnel from within the hospital whose duties are changed when a disaster occurs, and are they aware of their responsibilities?
- E. Has a chain-of-command been developed for the hospital and its departments?
- F. Have communication links been developed within the hospital when normal communication services are disrupted?
- G. Has a command centre been identified, as well as personnel who will occupy the centre and equipment that will be needed?
- H. Has a security plan been developed?
- I. Has each department developed its own checklist of what needs to be done within its areas to prepare for or react to a disaster?

#### **4. Survey the Facility**

- A. Location of the Hospital Command Centre
  - 1. Is it a central location, easily accessible and familiar to staff?
  - 2. Is the location isolated from where patient care will be given?
  - 3. Are there adequate telephone lines into the location (at least one direct line out of the building)?
  - 4. Will press briefings be given from this location or will another place be designated?
  - 5. Is the location powered by the emergency generator?
  - 6. Is it large enough for command activities?
  - 7. What furniture will be needed during command centre operations?
  - 8. Are tasks for those manning the command centre formulated?
  - 9. Have you made photos of your buildings and structures on your campus?
  - 10. Have you evaluated your insurance coverage with your insurance agent?
  - 11. Has your facility been equipped to connect with an external, mobile emergency generator if necessary?
- B. Treatment of emergency patients
  - 1. Will there be too many patients for the space in the emergency department?
  - 2. Where will triage take place?
  - 3. Will patients have to be evacuated? Where to? How will they get there?
  - 4. Will decontamination from a chemical or radioactive material exposure be required? Where and with what equipment?
- C. Damage assessment to the hospital
  - 1. Is the structural integrity of the building compromised?
  - 2. Is the emergency generator damaged?
  - 3. Are there alternative sources of essential utilities?
  - 4. Are elevators safe?

5. Is the water system functional?
  6. Is water safe to drink?
  7. Are ceilings safe to work under?
  8. Is the HVAC system working?
  9. Are communication systems working?
  10. Is the sewage system working?
  11. Are the fire suppression and alarm systems working?
  12. Is there a water rationing plan in the event of water outage or other water problems?
  13. Is there a camera with adequate amount of film available to record damages to the building and equipment for insurance purposes?
- D. Identify patient rooms that may have to be used by physicians and staff if their presence is required around the clock.

## **5. Supplies**

- A. Are the following supplies identified or stored for use during a disaster?
1. Flashlights and batteries
  2. Water for immediate use
  3. Medical supplies
  4. Medical equipment (batteries charged)
  5. Beds
  6. Wheel chairs
  7. Linen
  8. Litters
  9. IV equipment
  10. Bed pans and urinals
  11. Pharmaceuticals
  12. Cellular telephones or other communication linkages
  13. Food
  14. Other supplies and equipment identified by the disaster planning committee
  15. Weather alert receiver
  16. Extra supply of oxygen
  17. Plywood to protect windows (minimum of ¾" thick)
  18. Adequate fuel supply for the emergency generator
  19. Sand bags and rolls of plastic if located in flood prone areas
- B. Are there emergency "disaster kits" (flashlights, batteries, etc.) located on patient care floors, treatment areas or other designated areas that are immediately accessible if a disaster were to occur, and are they inspected at least annually? (Prior to hurricane season for coastal hospitals.)
- C. Have mutual agreements been signed with another hospital(s) (in and outside of your location) to assist in furnishing supplies/equipment in the event there is a need?
- D. Have agreements been made with vendors (in and outside of your location) to furnish supplies/equipment during a disaster?
- E. Are status reports given daily on supplies and equipment during recovery

period?

#### **6. Accounting**

- A. Are the computers that contain vital records and financial information on the emergency generator and uninterrupted power sources?
- B. Are there computer back-up files kept by the medical records and accounting departments and stored in a safe place (where they will not receive water or wind damage)?
- C. Is there a system to gather insurance information from patients who present themselves or someone else to your hospital during the disaster?
- D. Is there a system to pay employees by cash in the event of a major disaster?
- E. Does the CEO have the board's approval for layoffs or over-hires during a disaster?
- F. Is there a system in place to pay or reimburse for patient transfers and/or "out of the ordinary" services that are generated by a disaster?

#### **7. Patient Care**

- A. Is a procedure in place to discharge patients who can be discharged?
- B. Is a triage area determined if the emergency department is over flowing?
- C. Are medical department roles spelled out?
- D. Are standing orders developed?
- E. Are there plans to care for community special needs patients, e.g., dialysis patients, oxygen dependent patients, etc.?
- F. Are there agreements with other facilities to transfer patients that require a higher level of care?
- G. Have arrangements been made for transportation of those patients being transferred?
- H. Has a protocol been developed to determine which patients require staff accompaniment during transfer and what level of staff is to accompany the patient?
- I. Have transportation routes been determined for the transfer of patients?
- J. Are status reports given on patient census and bed availability?

#### **8. External Coordination**

- A. Has contact been made with the following entities to coordinate each other's role during a disaster?
  - 1. County emergency preparedness agency
  - 2. Local chapter of the American Red Cross (it operates disaster shelters and offers assistance to disaster-stricken persons)
  - 3. Long-term care facilities in the hospital's vicinity
  - 4. Other organisations which care for special needs patients which may end up in your facility
  - 5. Local National Guard (remember, its assets and services belong to the Governor during disasters)
  - 6. Other hospitals, should you have to evacuate
  - 7. Fire department
  - 8. Police department
  - 9. Emergency medical services (ambulances, private and public)

- 10. Local utility companies
- 11. External means of transporting patients (bus companies)
- 12. Local funeral homes for temporary morgue facilities
- B. Coordinate with other hospitals or vendors in developing assistance agreements for supplies, equipment and/or personnel.
- C. Coordinate with local amateur radio operators to assist you in the event of communication disruption (this will require having radios within your facility and antenna on your roof).

#### **9. Evacuation**

- A. Who authorises evacuation of the hospital?
- B. For partial evacuation, are areas identified within the hospital where patients will be evacuated? Consider utility requirements for ICU/CCU and OR patients.
- C. Has coordination been planned with receiving unit, and is there equipment to transport when partial evacuation is required?
- D. For full evacuation, has coordination been arranged with receiving facilities and has transportation been arranged to move the patients?
- E. Identify who will accompany relocated patients.
- F. Are evacuation routes identified?

#### **10. Drills**

- A. When you conduct disaster drills, are all types of disasters eventually addressed? (See paragraph II, section A)
- B. Are all aspects of a supposed disaster tested or only mass casualties?
- C. Do drills include testing external agreements that you have with hospitals/vendors?
- D. Are areas of the plan tested other than activating the recall roster?
- E. Do staff members understand their functions during a drill?
- F. Are drills evaluated using criteria determined by the disaster planning committee or the safety committee?
- G. Are drills critiqued to determine short falls and strengths?
- H. Is the entire disaster planning committee present for critiques?
  - I. Is the disaster manual corrected when short falls are determined?
- J. Are new employees educated in what is expected of them during a disaster?
- K. Are all hospital activities involved in disaster drills: engineering, materials, biomedical engineering, accounting, etc.?

#### **11. Recovery**

- A. Have you made video or taken photos of the damage to the buildings on your campus?
- B. Have you contacted your insurance agent?
- C. Have you made a damage assessment?
- D. Are your buildings structurally sound?
- E. Will you have to totally evacuate or curtail certain services?
- F. Will outside staffing be required to allow your staff members time to take care of their personal disaster needs?
- G. Have broken windows and roof openings been covered?

- H. Is there equipment and/or supplies that need to be protected from the elements if there is damage?
- I. Are there any environmental concerns?
- J. Have you categorised all disaster-related costs with a separate cost code for accounting purposes?
- K. Have you established a crises counselling opportunity for staff affected by the disaster?

This checklist is not meant to be all encompassing. The intention is to stimulate idea sharing and coordination among the designated committee members to develop the disaster plan for the hospital.

(Developed by Paul V. Richter, 4/95. Revised 1/96, 4/96, 1/97, 6/97)

## Handout 6: T.R.A.I.T. of a Health Emergency Manager/Coordinator

**Take** the lead within the community in:

- health coordination and networking
- rapid health assessment
- disease control and prevention
- epidemiologic and nutrition surveillance
- epidemic preparedness
- essential medicines management
- physical and psychosocial rehabilitation
- health risk communication
- forensic concerns and management of mass casualties

**Record** and re-evaluate lessons learned to improve preparedness in the future

**Assess** and monitor health and nutrition needs so that they are immediately dealt with

**Improve** health sector reform and capacity building by networking

**Tend** and protect the practice of humanitarian access, neutrality and protection of health systems in emergency situations

*Source: Pocket Emergency Tool 2nd Ed. by Health Emergency Management Staff-DOH, Phils, WHO-WPR*

## Handout 7: Systematic Approach to Training (SAT)

The fact that current DM and DRR related training practices are largely ad hoc and not based on clear identification of training needs call for a systematic approach to training. There seems to be a global consensus that training in order to be effective has to be based on a systematic approach.

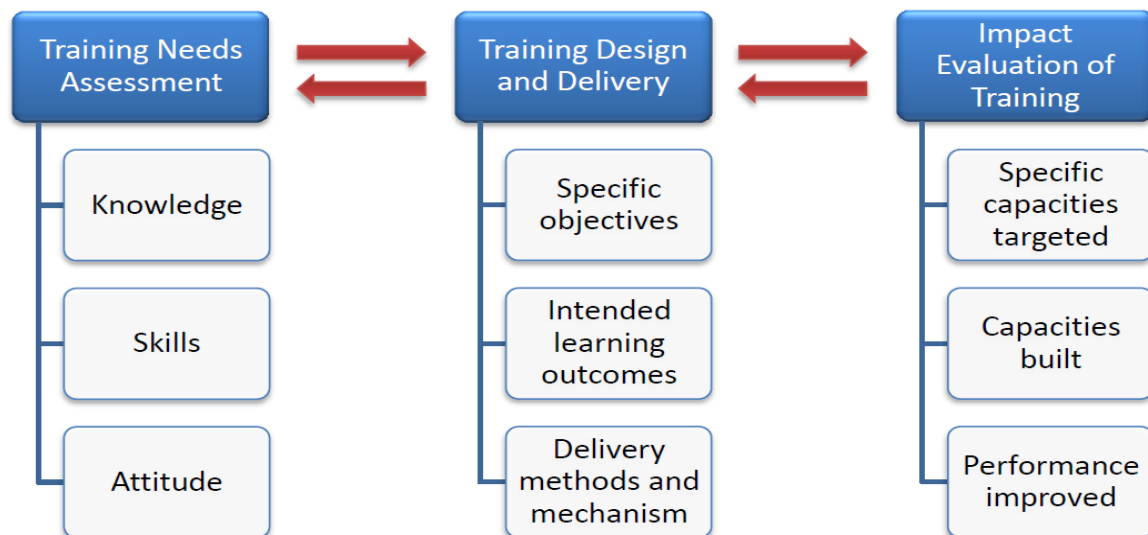
A systematic approach to training (SAT) pre-supposes the following:

- Training is based on identified training needs and is in response to real and not imagined needs of the functionaries involved
- Participants are selected on the basis of training needs and not on other factors including their easy availability for training.
- Impact of training is evaluated and learning used to improve the training design and delivery further for better results.

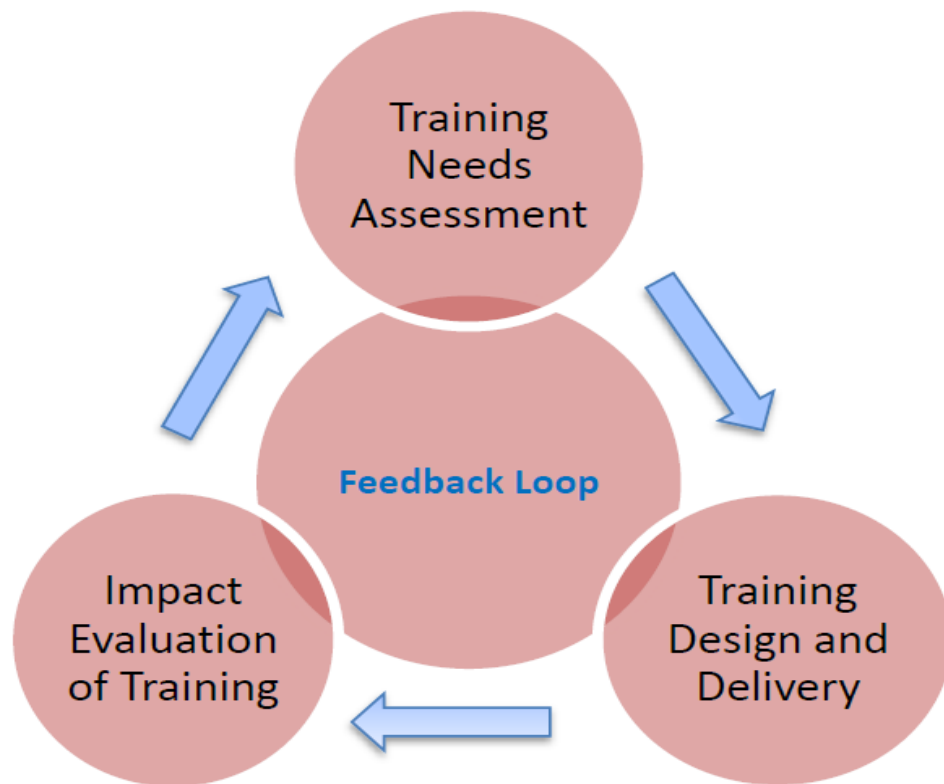
The first and last related to training needs and impact evaluation happen to be the blind spots of training in the development sector in general and in the field of disaster management in particular. Even the performance of the second one related to selection of participants for training is suspect and skewed in many cases as revealed by the study.

The following figures present the suggested framework for implementation of training, which is based on the larger capacity development framework of the study, but targets only training for the purpose of this framework.

### Strategic Framework for Implementation of Training (SFIT)



## Feedback Loop



The current training practices are in general limited mainly to training design and delivery component of the suggested framework. This is generally not preceded by any systematic training needs assessment and is usually not followed up by any kind of impact evaluation. This is practically like shooting in the dark: one of course is hitting some target, but is never sure what and with what consequences.

This framework can be used to streamline the training functions in a manner that leads to targeted capacity development for disaster management and disaster risk reduction across sectors.

## Handout 8: Capacity Needs and Training Needs Assessment

### Capacity, Capacity Needs and Training Needs<sup>4</sup>

Capacity for the purpose of this framework is defined as the overall capability of an actor (individual or institution) to perform and produce results. Capacity is a relative term and can be defined only in relation to the roles and responsibilities of the concerned actors as stakeholders. In case of functionaries at work, capacity is defined in terms of knowledge, skills and attitude that they possess to carry out a given task and achieve a certain intended result. In the case of organisations, capacity is defined in terms of overall organisational capability to plan and implement schemes, programmes and projects to achieve a given set of objectives on scale.

### Capacity Needs



Training as a tool to build capacity seeks to upgrade knowledge, skills and attitude (KSA) of the people being trained. Organisational re-engineering and development including re-designing the business processes and work protocols are the means to enhance organisational capacity to function and deliver the required goods and services to achieve the agreed objectives. This may entail re-defining the functional goals of the organisation and developing strategic action plans, besides mobilising resources and upgrading the existing infrastructure to increase the organisational capacity.

As this framework relates to training, a look at the current training scenario with specific reference to DM and DRR functions would be in order. Training is of various types differentiated by factors such as length/duration of training, content of training, training methods and tools. There are different types of training categorised by their nature, location, level, duration, purpose and methodology. These include: general and specialised training; induction, in service and follow up training; on site and off site training; training of trainers.

Conventional notion of training carries the image primarily of a class room activity based on a vertical relationship between the trainer and trainees: this is characterised by a top down relationship between the trainer as teacher and the participant as the learner. This is now universally recognised to be outmoded and of limited use, as the retention and use of

<sup>4</sup> Strategic Framework for Implementation of Training( pg 20-21), Deliverable 6, Preparing Long Term Training and Capacity building Strategy, NCRMP

learning received through one way top down method (mainly lectures) by an expert is very low, as it does not fit in with adult modes of learning. But class room training sessions are still the most widely used training methodology both at NIDM and state level Disaster Management Centres (DMCs). Most of the class room training is theoretical and of a general nature. Practical training aimed at building specific knowledge and skills of specific groups of people is very limited and has yet to be undertaken in a systematic manner and on scale.

There are other innovative modes of training that have been used in varying degrees in recent years. These include online training, blended learning, satellite training etc. These have been used by NIDM, Indian Institute of Remote Sensing, Vigyan Prasar and state level agencies such as in Karnataka. But the specific ways in which these modes help have yet to be ascertained and fully appreciated.

## Handout 9: Training/Behavioural Objectives: Verbs to Describe Complexity of Behaviour

### 1. **Knowledge:** The recall of information.

|          |        |           |
|----------|--------|-----------|
| define   | name   | order     |
| describe | recite | recognise |
| label    | recall | record    |
| list     | relate | reproduce |
| match    | repeat | state     |
| arrange  |        | underline |

### 2. **Comprehension:** The translation, interpretation or extrapolation of knowledge.

|          |           |             |
|----------|-----------|-------------|
| arrange  | explain   | interpret   |
| classify | express   | locate      |
| describe | indentify | report      |
| discuss  | indicate  | restate     |
| sort     | translate | extrapolate |

### 3. **Application:** The application of knowledge to a new situation.

|            |          |             |
|------------|----------|-------------|
| apply      | practice | solve       |
| Choose     | prepare  | use         |
| Illustrate | schedule | demonstrate |
| Operate    | sketch   | measure     |

### 4. **Analysis:** To break down knowledge into parts and show relationships among the parts.

|            |              |               |
|------------|--------------|---------------|
| analyse    | diagram      | question      |
| appraise   | discriminate | test          |
| calculate  | distinguish  | differentiate |
| categories | exafmine     | compare       |
| contrast   | experiment   | inventory     |
| criticise  |              |               |

### 5. **Synthesis:** Bringing together parts (elements, components) of knowledge to form a whole and build relationships for new situations.

|           |           |            |
|-----------|-----------|------------|
| arrange   | design    | prepare    |
| assemble  | formulate | propose    |
| collect   | manage    | set up     |
| compose   | organise  | synthesise |
| create    | plan      | write      |
| construct | modify    | conduct    |

### 6. **Evaluation:** Judgments about the value of material and methods for given purposes.

|          |          |         |
|----------|----------|---------|
| appraise | estimate | select  |
| argue    | evaluate | support |
| assess   | judge    | value   |
| attack   | predict  | score   |
| compare  | rate     | defend  |

## Handout 10: Johari Window<sup>5</sup>

It is a simple and useful tool for understanding and training self-awareness, personal development, improving communications, interpersonal relationships, group dynamics, team development and intergroup relationships.

It is also referred to as a 'disclosure/feedback model of self-awareness', and an 'information processing tool'. It represents information - feelings, experience, views, attitudes, skills, intentions, motivation, etc - within or about a person - in relation to their team, from four perspectives.

### Standard Representation

|        |         | Self                |                   |
|--------|---------|---------------------|-------------------|
|        |         | Known               | Unknown           |
| Others | Known   | 1<br>Open/Free Area | 2<br>Blind Area   |
|        | Unknown | 3<br>Hidden Area    | 4<br>Unknown Area |

### The four Johari Window perspectives:

Called 'regions' or 'areas' or 'quadrants' each contains and represents the information - feelings, motivation, etc – in terms of whether the information is known or unknown by the person, and whether the information is known or unknown by others in the team.

The four regions, areas, quadrants, or perspectives are as follows, showing the quadrant numbers and commonly used names:

1. Open area, open self, free area, free self, or 'the arena': what is known by the person about him/herself and is also known by others.
2. Blind area, blind self, or 'blindspot': what is unknown by the person about him/herself but which others know.
3. Hidden area, hidden self, avoided area, avoided self or 'façade': what the person knows about him/herself that others do not know

<sup>5</sup> <http://www.usc.edu/hsc/ebnet/Cc/awareness/Johari%20windowexplain.pdf>

4. Unknown area or unknown self: what is unknown by the person about him/herself and is also unknown by others

## Handout 11: Stephen Covey's seven habits of highly effective people

### Stephen Covey's Seven Habits of Highly Effective People<sup>6</sup>

#### Habit 1 - be proactive

This is the ability to control one's environment, rather than have it control you, as is so often the case. Self-determination, choice, and the power to decide response to stimulus, conditions and circumstances

#### Habit 2 - begin with the end in mind

Covey calls this the habit of personal leadership - leading oneself that is; towards what you consider your aims. By developing the habit of concentrating on relevant activities you will build a platform to avoid distractions and become more productive and successful.

#### Habit 3 - put first things first

Covey calls this the habit of personal management. This is about organising and implementing activities in line with the aims established in habit 2. Covey says that habit 2 is the first, or mental creation; habit 3 is the second, or physical creation.

#### Habit 4 - think win-win

Covey calls this the habit of interpersonal leadership, necessary because achievements are largely dependent on co-operative efforts with others. He says that win-win is based on the assumption that there is plenty for everyone, and that success follows a co-operative approach more naturally than the confrontation of win-or-lose.

#### Habit 5 - seek first to understand and then to be understood

One of the great maxims of the modern age. This is Covey's habit of communication, and it's extremely powerful. Covey helps to explain this in his simple analogy 'diagnose before you prescribe'. Simple and effective, and essential for developing and maintaining positive relationships in all aspects of life.

#### Habit 6 - synergise

Covey says this is the habit of creative co-operation - the principle that the whole is greater than the sum of its parts, which implicitly lays down the challenge to see the good and potential in the other person's contribution.

#### Habit 7 - sharpen the saw

This is the habit of self renewal, says Covey, and it necessarily surrounds all the other habits, enabling and encouraging them to happen and grow. Covey interprets the self into four parts: the spiritual, mental, physical and the social/emotional, which all need feeding and developing.

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<sup>6</sup> <http://www.businessballs.com/sevenhabitssteven Covey.htm>

## Annexure 3: Design Brief

### CLIENT

The National Disaster Management Authority (NDMA) and the National Institute of Disaster Management (NIDM) of India.

### WHY THIS TRAINING COURSE?

#### Performance Problem

This training package is developed as a tool to train master resource persons on preparation of hospital disaster management plans.

India is the seventh largest country of the world with the total geographical area of 3,287,240 sq. km. (Census 2011). Such a large and diverse geo-climatic condition makes India highly vulnerable to different natural disasters. Out of 35 states/union territory, 22 are categorised under multi hazard prone states. India is highly vulnerable to earthquake, drought, flood, cyclone, landslide and avalanche. 68% of land mass is prone to drought, 60% is vulnerable to earthquake, 12% of the total area is prone to flood and 8% of the land is susceptible to cyclone. Changing climatic conditions, over exploitation of natural resources and unplanned urbanisation are adding on to the increasing frequency of natural disasters.

Total population of India is 1210 million (census 2011), which is the second largest in the world. A large population (more than 400 million) of poor and their multiple vulnerabilities accounts for India's third rank in terms of victims of natural disasters.

Hospitals constitute a part of critical lifeline infrastructure in the context of disasters. A safe and resilient hospital not only ensures an effective healthcare response during disasters but also ensures the safety of the patients already being treated in those hospitals.

This calls for high order of preparedness in the hospital in order to deal with disaster related emergencies with mass casualties and the resultant need for hospital space, staff and resources at various levels. Though as mandated by the DM Act 2005 every hospital is required to have an emergency plan in place but the past incidents like fire accidents in the AMRI hospital in 2011 raises a question on the effectiveness of the plan. The past experience also suggests that the plans available at the hospital are not frequently updated and shared with the entire staff and there are no regular mock drills as well. The field data collected during the study suggested that there has been no specific training given to the doctors or other staff who are supposed to prepare these safety plans.

The proposed training intervention seeks to create capacity at level of hospital management to prepare and effective implementation hospital disaster management plans.

## Aim

To facilitate creation of requisite capacity within the hospital staff to prepare and effectively implement the hospital disaster management plan.

Trained master resource persons are supposed to train 9,400 resource persons who will be organising direct training programs at district and sub district levels to train 2,818,018 elected members across different districts in the country over a span of 5 years.

## WHO IS INVOLVED?

### Trainee Profile

Chief Medical Officers (CMOs), Doctors at government hospitals preferably with training experience and interest.

### Overall Numbers of Trainees in the Health Sector

The total number of government hospitals in the country is 11,614. To begin with, it is considered that 5 doctors .The total number of personnel to be trained during the first five years would work out to be as follows:

#### Universe to Be Addressed

| Category                                             | Numbers to be trained |
|------------------------------------------------------|-----------------------|
| Government hospitals' Doctors @ 5 from each hospital | 58,070                |
| Doctors attached to PHCs                             | 30,198                |
| <b>Total Doctors</b>                                 | <b>88,268</b>         |

Source: <http://nrhm.gov.in/>

### Duration

This training package is designed as a set of two modules to be run over a period of 5 days:

1. A base module of 3 days;
2. A TOT module of 2 days;

### **Number of trainees per course**

The training module will be conducted in a batch of 24 participants.

### **Resource Persons**

It is recommended that the TOT is facilitated by a team of two lead facilitators: one, an experienced trainer of at least 10 years of proven track record of training senior government officials; two, a health sector professional with first-hand experience of hospital management of at least 10 years

### **Constraints**

Human resources: acute shortage of doctors especially in rural areas and their resultant non-availability for long duration residential training is a major constraint in designing and organising such training events.

### **BASE MODULE**

#### **Aim**

Equip the resource persons with requisite knowledge and skill for organising direct training programs of doctors for preparation and effective implementation of hospital disaster management plan.

## Objectives

| Performance objectives                                                                                                                                                                                                                                                                                                                  | Training objectives                                                                                                                                                                                                                                                                                                                                                                                                                                               | Enabling objectives                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Trained doctors and health functionaries are able to develop and review a workable hospital disaster management plan in their respective hospitals and health centres.</li> <li>Trained doctors and health functionaries are able to implement the hospital disaster management plan.</li> </ul> | <p><i>The following training objectives seek to help the participants:</i></p> <ul style="list-style-type: none"> <li>To impart requisite knowledge on the fundamentals of disaster risk management, various phases of disaster management;</li> <li>To articulate the importance, goals and objectives of a hospital disaster management plan</li> <li>To illustrate the process of preparation of a disaster management plan and its implementation.</li> </ul> | <p><i>At the end of the training participants are able</i></p> <ul style="list-style-type: none"> <li>Articulate the concept and terminologies of disaster risk reduction, various phases of disaster management.</li> <li>To delineate the basic principles of hospital disaster management plan.</li> <li>Prepare checklist for hospital safety</li> </ul> |

## Training Needs

- Basic orientation and sensitisation on DM and DRR including: the DM act; policy; relevant legislations;
- Sensitisation on Conducting mock drills in co-ordination with different functionaries including Govt. Depts. & NGOs.

## Duration

The base module will be run over a period of 3 days.

## Trainee Profile

- Participants of TOT are intended to be potential master trainers for this module. Criteria for selection of participants will include the following:
- At least 10 years of demonstrated experience in the health sector in general and hospital management in particular.
- Experience in provision of emergency health services.
- Experience and interest in functioning as trainers; prior experience of attending training of trainer program such as DTS, DOT, MOT, TNA will preferred.

## Entry behaviour

Entry behaviour means assumed entry behaviour. There could be variations in actual entry behaviour which will be assessed at the beginning of each training program. This training programs basically aims at training the doctors/CMOs who are in charge of hospital safety and are involved in the preparation of hospital disaster preparedness and management plan.

The TOT module has been designed in view of the envisaged role of resource persons which may not be reflected in their entry behavior at the outset of the training.

## Detailed Training Outline and Learning Units of the ToT Module

The module will attempt to kick-start the thinking process and generate discussion, rather than prescribe rigid solutions as people will have to adapt these fundamentals to varying situations on the ground.

| Learning units                                                                    | Objectives                                                                                                                                                                                                                                                    | Session(s)                                                                                                                 | Method                                                                                                 | Media / performance aids                           | Assessment measures | Time                                                  |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------|-------------------------------------------------------|
| <b>INTRODUCTION</b>                                                               |                                                                                                                                                                                                                                                               |                                                                                                                            |                                                                                                        |                                                    |                     |                                                       |
| Welcome<br>Know each other and about the workshop                                 | By course organisers<br><br>By trainees: Introductions, educational/work background and expectations from training<br><br>By resource person: Introduction and brief explanation of what to expect over the course of the training.<br><br>Address the 'WHY'! | Welcome address<br><br>Individual and Group Exercises<br><br>Games<br><br>Power point presentation (PPT)<br><br>Discussion | Black/white board/PPT slide on module outline/ expected schedule                                       |                                                    | 45 min              | Welcome<br><br>Know each other and about the workshop |
| <b>Learning Unit 1: Disaster Management and Health: Key Issues and Challenges</b> |                                                                                                                                                                                                                                                               |                                                                                                                            |                                                                                                        |                                                    |                     |                                                       |
|                                                                                   | Describe the key concepts in disaster                                                                                                                                                                                                                         | 1. Basic concepts of hazard, risk vulnerability and                                                                        | <ul style="list-style-type: none"> <li>Interactive lecture presentation</li> <li>Group work</li> </ul> | Markers, A4 size sheets and flip charts, handouts. | Internal validation | 3 hours                                               |

|                                                                 |                                                                                                                                                                                                                                                 |                                                                                                                                                                                |                                                                                                                                  |                                |                     |           |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------|-----------|
|                                                                 | <p>management, particularly: hazard, risk, vulnerability and capacity</p> <p>Describe the disaster management cycle and its various phases</p> <p>Explain DM Act and Policy and its relevance to the provision of emergency health services</p> | <p>capacity</p> <p>2. Disaster management cycle: stages and issues</p> <p>3. DM Act and Policy with their specific relevance to the provision of emergency health services</p> | <ul style="list-style-type: none"> <li>• Questions and Answers</li> <li>• Discussion</li> </ul>                                  |                                |                     |           |
| <b>Learning Unit 2: What constitutes hospital preparedness?</b> |                                                                                                                                                                                                                                                 |                                                                                                                                                                                |                                                                                                                                  |                                |                     |           |
|                                                                 | <p>Analyse the crucial role of hospitals in emergencies.</p> <p>Spell out the various constituents of hospitals safety and preparedness</p> <p>Examine the significance of a</p>                                                                | <p>Roles and functions of hospitals in health emergencies</p> <p>Constituents of hospital safety</p>                                                                           | <ul style="list-style-type: none"> <li>• Group work</li> <li>• Discussion</li> <li>• Interactive lecture presentation</li> </ul> | Flip charts, markers, hand-out | Internal validation | 2.5 hours |

|                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                |                                                                                                                                                                                        |                                                                     |                     |           |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------|-----------|
|                                                                                      | hospital disaster management plan                                                                                                                                                  |                                                                                                                                                                                                                |                                                                                                                                                                                        |                                                                     |                     |           |
| <b>Learning Unit 3: Preparation of hospital disaster management plan</b>             |                                                                                                                                                                                    |                                                                                                                                                                                                                |                                                                                                                                                                                        |                                                                     |                     |           |
|                                                                                      | <p>Identify the aim, objectives and basic principles of a hospital disaster management plan.</p> <p>Describe the process of generating a hospital disaster management plan</p>     | <p>Basic principles of hospital disaster management plan</p> <p>Developing a hospital disaster management plan: key steps</p> <p>Various phases of disaster preparedness plan</p> <p>Pre disaster planning</p> | <ul style="list-style-type: none"> <li>• Group work</li> <li>• Interactive Lecture Presentation</li> <li>• Discussion in the plenary</li> <li>• Summing up</li> </ul>                  | <p>PPT</p> <p>Documentary / film</p> <p>Flipcharts</p> <p>Cards</p> | Internal validation | 5.5 hours |
| <b>Learning Unit 4: Hospital disaster management plan: review and implementation</b> |                                                                                                                                                                                    |                                                                                                                                                                                                                |                                                                                                                                                                                        |                                                                     |                     |           |
|                                                                                      | <p>Articulate the key elements of a good plan.</p> <p>Prepare checklists for reviewing the hospital safety</p> <p>Work out requirements for the training of hospital staff and</p> | <p>1. Effective hospital disaster management plan: key elements</p> <p>2. Preparing checklist for hospital safety</p> <p>3. Training of hospital staff and mock drills</p>                                     | <ul style="list-style-type: none"> <li>• Group Work</li> <li>• Presentation and discussion in the plenary</li> <li>• Interactive Lecture Presentation</li> <li>• Summing up</li> </ul> | <p>Flip charts, markers, hand-out</p>                               | Internal validation | 4.5 hours |

|                                                                              |                                                                                                                                              |                                                                                                                           |                                                                                                        |                                        |                     |        |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------|--------|
|                                                                              | organising mock drills                                                                                                                       |                                                                                                                           |                                                                                                        |                                        |                     |        |
| <b>Learning Unit 5: Health information system: monitoring and evaluation</b> |                                                                                                                                              |                                                                                                                           |                                                                                                        |                                        |                     |        |
|                                                                              | Describe the role of health information system in monitoring and evaluation of the hospital disaster management plan and its implementation. | Monitoring the implementation of hospital disaster management plan<br>Evaluation of the hospital disaster management plan | Group work<br>Presentation and discussion in the plenary<br>Closing remarks                            | Flip charts, markers                   | Internal validation | 3 hour |
| <b>EVALUATION AND FEEDBACK</b>                                               |                                                                                                                                              |                                                                                                                           |                                                                                                        |                                        |                     |        |
|                                                                              | Evaluation<br>Gather feedback                                                                                                                |                                                                                                                           | <ul style="list-style-type: none"> <li>• Presentations of assignments</li> <li>• Discussion</li> </ul> | Checklist to evaluate<br>Feedback form | Internal validation | 45 min |

## TOT SUB- Module

### Aim

The aim of this sub-module is to introduce the participants to the basic knowledge and skills related to design and delivery of training.

| Performance objective                                                                                                                  | Training objectives                                                                                                                                                                                                                                      | Enabling objectives                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>In their jobs, the resource persons will:</i><br>1. Design and develop training module<br>2. Facilitate training programs/workshops | <i>After the training course, the trainees will be able to:</i><br>1. The participants will be able to adapt the base sub-module to specific local contexts in which further training programmes are to be organised and organise it with effectiveness. | <i>During the training, the trainees will learn to:</i> <ul style="list-style-type: none"> <li>• Conduct training need assessment</li> <li>• Design a training program in terms of its content, methodology</li> <li>• Evaluate and monitor the training program</li> <li>• Facilitation skills for training</li> </ul> |

### Objectives

### Duration

The TOT sub-module will run over 2 days.

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