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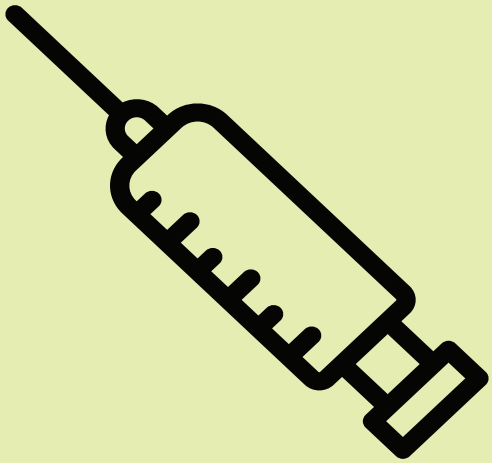
Modules for Training Hospital Stakeholders on Hospital Safety

SESSION PLAN AND GUIDELINES FOR TRAINERS/INSTRUCTORS OF HDM BASIC



NURSES AND FRONTLINE STAFF

March 2023

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IIM AHMEDABAD

Indian Institute of Management
Ahmedabad

National Disaster Management Authority
Government of India

Modules for Training Hospital Stakeholders on Hospital Safety:

Session Plan and Guidelines for Trainers/Instructors of HDM Basic (Nurses and Frontline Staff)

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NATIONAL DISASTER MANAGEMENT AUTHORITY

Preface

Since its inception in 2005, the National Disaster Management Authority (NDMA) has undertaken numerous initiatives for Disaster Risk Reduction and capacity building for disaster management in conformity with its mandate under the Disaster Management Act, 2005. This Hospital Disaster Management (HDM) Manual is an initiative in that direction. The manual focuses on important and critical areas of Hospital Safety during disasters. It contains training modules on Hospital Safety that have been developed in line with the 2016 NDMA guidelines.

The contents of this manual have been prepared keeping in mind all the stakeholders in a hospital setting across multiple levels, including the Leaders, Assessors, Doctors and Front line Staff (nurses, paramedics, ward boys, security staff and ambulance staff). It seeks to empower these stakeholders to address Hospital Safety through a multi-hazard and interdisciplinary approach. While the structural safety of hospitals has been emphasized in recent building guidelines, these modules aim to strengthen the capacity of stakeholders in every hospital in the country to develop a fully functional and regularly tested Hospital Disaster Management Plan (HDMP). The manual has been reviewed by several experts and will serve as a handy document for all training programmes on Hospital Safety.

We take this opportunity to express our heartfelt appreciation to the team of experts from IIM Ahmedabad and various stakeholders who extended their willing support, cooperation and commitment by devoting their expertise to make valuable contributions to the development of this document. We are optimistic that this effort will go a long way in enhancing the preparedness of hospitals in handling any disaster if and when it strikes.

Sh. Kamal Kishore
Member Secretary
Incharge

Sh. Krishna S. Vatsa
Member

Sh. Rajendra Singh
Member

Lt.Gen. Syed Ata Hasnain (Retd.)
Member

Message

The role that health facilities, especially hospitals, can play in response to emergencies and disasters can hardly be undermined. Thus, the loss to health infrastructure as well as economic losses can be humongous when hospitals are destroyed or damaged due to poor construction or improper planning for disasters.

An effective design and implementation of disaster management plan entails seamless coordination between three different types of stakeholders. The first are technical experts and scientists who study the phenomenon of disaster in detail and develop in depth understanding of the mechanisms thus proposing measures for prevention, early detection and proper response. The second are implementers, for example the leaders, managers and employees in the hospital who are involved in the day-to-day activities. The third set of stakeholders are management experts who are concerned with the design of structure, systems, and processes for enabling designing, owning and implementation of the disaster management plans in the hospitals.

Implementation can be strengthened by creating a culture of safety since that culture will ensure regular capacity strengthening programmes, sound hospital safety assessment and planning, and strengthen compliance. For this to happen, a management approach has to be adopted.

For developing and implementing these Hospital Safety Modules, a multi-stakeholder approach has been adopted keeping in perspective that every stakeholder has a different role and responsibility to play. Thus, every stakeholder must be made a participant. Ensuring capacity, commitment and communication at all levels is the only way to make a hospital a highly resilient and high reliability organization and once this is achieved, a culture of safety is bound to continue.

Development of the Modules for Hospital Safety is a crucial step in this direction and we hope that by using these, Hospitals of India will become Safe hospitals, thereby contributing to the country's strategy for disaster risk reduction.

Rajesh Chandwani
Faculty, Human Resource Management Area
Dr Lal PathLabs Chair in Healthcare
Indian Institute of Management Ahmedabad.

Foreword

The World Health Organization (WHO)recognizes a Safe Hospital program as an essential component of a country's strategy for Disaster Risk Reduction (DRR)and, in particular, Emergency and Mass Casualty Management. The number of healthcare facilities in India, including both big and small hospitals, is growing by the day. Various government and accreditation agencies have mandated that every hospital ensure strict adherence with various structural, functional and safety norms and guidelines to ensure Hospital Safety and preparedness for disasters in accordance with the National Disaster Management Act, 2005, and the National Disaster Management Authority (NDMA)Guidelines on Medical Preparedness and Mass Disasters (2007) and NDMA Guidelines on Hospital Safety (2016). However, it is not unusual to hear of instances where hospitals and their patients have suffered due to some internal or external disasters.

Strict adherence to Hospital Safety norms and guidelines is possible only when every stakeholder is aware of these guidelines and of the consequences of non-adherence and has the knowledge, commitment, and capacity to execute their specific roles in ensuring Hospital Safety. Effective preparedness and responsiveness to disasters entail adequate and timely training of the medical community on how to respond to different types of disasters, both natural (earthquake, tsunami, cyclone etc.) and man-made (technological, terror attack etc). Such responses can mitigate the severity of the consequences of a disaster. These aspects depend on the design and implementation of a robust Hospital Disaster Management Plan (HDMP).

Disasters in hospitals not only have grave economic implications in terms of the investments required to reconstruct hospitals and restore damaged equipment, but they also affect healthcare delivery and create social challenges. Consequently, the NDMA has issued detailed guidelines on Hospital Safety. However, the effectiveness of these guidelines not only entails ensuring compliance with them but also creating a culture of safety, conducting regular capacity strengthening programs and undertaking detailed Hospital Safety assessments. Such a broad-based initiative requires a multi-stakeholder approach in which capacity, commitment and communication at all levels are essential.

The NDMA has entrusted the Indian Institute of Management Ahmedabad with the task of developing this training manual on Hospital Safety, which adopts a multi-stakeholder approach to capacity strengthening and resilience building. The training modules aim to support training on Hospital Safety for four levels of stakeholders in hospitals – (1) Nurses and Frontline Staff, (2) Doctors and Managers, (3) Leadership Teams and (4) Assessors. The training modules will enable the hospital teams to adopt an "all-hazards approach" to assess Hospital Safety and develop a HDMP that can be used in response to all kinds of hazards that can lead to disasters. This document also explains the roles and responsibilities of all stakeholders in the face of disasters.

We hope that the clear and detailed training modules will enable hospitals to prepare for and respond to any disaster – internal or external – that comes their way.

Errol D'Souza
Former Director,
(Jan. 2018-Feb. 2023)
Indian Institute of Management Ahmedabad

The Way Forward

Hospitals are the first point of care and treatment during disasters and thus, it is most crucial for hospitals to be safeguarded from, and to be resilient to disasters. This requires the hospitals to be well prepared for facing the disaster, manifest appropriate and swift response to the disaster and also to engage in post disaster relief measures. This entails involvement of hospital personnel across levels.

The need for ongoing capacity strengthening programs for all the stakeholders of hospitals cannot be undermined. I am sure these training modules will help in increasing the awareness of various stakeholders including the frontline staff, doctors, nurses, the managers, leadership, and the auditors on various aspects of disaster management. It will also facilitate strengthening stakeholders' capacities for handling internal and external disasters and enable them to undertake more effective monitoring and evaluation of disaster preparedness for their own set-ups.

The pragmatic approach taken to design these manuals and the comprehensiveness of the training material enable the adaptability of the modules by the hospitals. I am hopeful that going ahead, these training modules will prove to be assets in the hands of the hospital owners, managers, and the medical fraternity to efficiently deal with natural and manmade disasters in order to make hospitals safe and resilient.

My best wishes to NDMA for its future endeavours.

Prof. Bharat Bhasker
Director,
Indian Institute of Management Ahmedabad

Intended Participants of the Training Manuals

The manual is intended to train four basic stakeholder groups working in/with hospitals, who are listed as follows:

Course Name	Level of Training	Intended Participants
HDM Basic	Level 1 – Basic Awareness	Nurses and Frontline Staff
HDM Intermediate	Level 2 – Mid-level Awareness	Doctors (Junior and Senior)
HDM Advanced	Level 3 – Advanced Level Awareness	Leadership Team
HDM Assessor	Level 4 – Hospital Disaster Management Assessor	Internal Auditors

This particular Training Module pertains to the HDM Basic Group i.e., Nurses and Frontline Staff

Disclaimer

This document is intended for educational and practical use by hospitals and their stakeholders to promote Hospital Safety by strengthening their resilience against disasters. The references used in preparing the document are listed at the end. The authors and/or the reviewing teams do not intend to derive any commercial benefits from this manual and, hence, all re-productions and references have been used in good faith.

Contents

Acknowledgements

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We would like to express our heartfelt gratitude to all the 17 Expert Committee members who, despite their own work schedules, were always willing to guide every aspect of the project and proactively also helped with material development for the training programme.

The Experts Committee Members are:

- Dr. D K Shami, Fire Adviser, Civil Defence & Home Guards, Ministry of Home Affairs, Government of India
- Dr. Atul Mohan Kochhar, CEO, National Accreditation Board for Hospitals & Healthcare Providers (NABH)
- Dr. Chetan Patel, Chairperson, IMA Disaster Management Cell
- Dr. Harshad Thakur, Director, National Institute of Health and Family Welfare, MoHFW
- Dr. Manish Chaturvedi, Director, National Institute of Health and Family Welfare, MoHFW
- Dr. S. Aravind, Chief Medical Officer and Director – Projects, Aravind Eye Hospital, Chennai
- Dr. Chandan Ghosh, Professor and Head - Resilient Infrastructure Division, National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India
- Dr. Yash Paul Bhatia, Member- FICCI Health Services Committee and Managing Director, Astron Hospital & Healthcare Consultants Pvt Ltd
- Dr. Bharat Gadhavi, CEO and Medical Director, HCG Group of Hospitals
- Dr. Narendranath Jena, Director and Head of Department, Institute of Emergency Medicine, Meenakshi Mission Hospital and Research Centre, Madurai
- Dr. Suhail Nazki, HOD, Emergency, Narayana Hospital, Jammu/IMA
- Mr. Neelay Srivastava, Director, Institution for Disasters, Emergency and Accidents (IDEA)
- Mrs Pooja Saxena, Lead DRR, Institution for Disasters, Emergency and Accidents (IDEA)
- Dr. Tran Minh Nhu Nguyen, Team Leader, Health Security and Emergency Response, World Health Organization

- Dr. Saurabh Dalal, Emergency, Risk & Crisis Management Officer, World Health Organization
- Dr. Anisur Rahman, Health Systems Strengthening Consultant, World Health Organization
- Dr. Priyanka Singh, Hospital Safety Expert, Indian Medical Association

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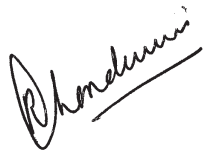

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Abbreviations And Acronyms

ALS	Advanced Life Support
BLS	Basic Life Support
CBO	Community Based Organization
DMC	Disaster Management Cycle
DDMA	District Disaster Management Authority
EOP	Emergency Operations Plan
HazMat	Hazardous Materials
HRO	High Reliability Organization
HDMP	Hospital Disaster Management Plan
HIRS	Hospital Incident Response System
HMS	Hospital Management System
HRVCA	Hazard, Risk, Vulnerability and Capacity Assessment
HVA	Hazard Vulnerability Analysis
HIS	Hospital Information Systems
IT	Information Technology
IRS	Integrated Response System
IEC	Information, Education and Communication
ICD	International Classification of Diseases
IoT	Internet of Things
KPI	Key Performance Indicators
NABH	National Accreditation Board for Hospitals & Healthcare Providers
NHSRC	National Health Systems Resource Center
NDRF	National Disaster Response Force
NDMA	National Disaster Management Authority
NCC	National Cadet Corps
NIDM	National Institute of Disaster Management
NSS	National Service Scheme
NYKS	Nehru Yuva Kendra Sangathan
PTSD	Post-Traumatic Stress Disorder
PIO	Public Information Officer
SDMA	State Disaster Management Authority
SDRF	State Disaster Response Force
UNIDSR	United Nations International Strategy for Disaster Reduction

1. Overview

Hospital Safety program design and implementation entail addressing safety at all levels of a hospital's functioning – from the physical facility and its technical specifications to creating a 'Culture of Safety' wherein all stakeholders are aware and confident about their roles and responsibilities in times of emergency or disaster. Hospital Safety necessitates managing all these aspects seamlessly through the development of a well-documented Hospital Disaster Management Plan (HDMP) and the creation of an enabling environment in which it can be implemented adeptly.

This training module is designed to orient Nurses and Frontline Workers to Hospital Safety norms. Hospital Safety is a crucial component of a country's strategy for Disaster Risk Reduction (DRR) and, in particular, emergency and disaster risk management for better health outcomes (WHO, 2015). There are 3 separate modules designed similarly for Doctors and Managers, Leaders (Management) and Internal Auditors respectively. Safe hospitals are health facilities that remain accessible and functional at the maximum capacity and that can provide services within the same infrastructure during and immediately following disasters, emergencies or crises (ISDR and WHO, 2009). While it may appear that the formulation of a robust and comprehensive Hospital Disaster Management Plan (HDMP) may suffice to keep a hospital safe, there is ample evidence to indicate that merely having an HDMP is not enough; there must be an effective system primed to facilitate its implementation. The commitment of the top leadership to Hospital Safety preparedness is crucial. The hospital leadership needs to generate awareness among all levels of staff about Standard Operating Procedures (SOPs) and plans related to Hospital Safety. This awareness could be generated through training and by fostering a 'Culture of Safety'. They should also ensure that all the systems and processes that facilitate Hospital Safety, including Compliance, Monitoring and Evaluation systems, are in place. The recent hospital fires that took place in August 2020 at Shrey Hospital, Ahmedabad, and Ramesh Hospital, Vishakhapatnam, are classic examples of violations of the Disaster Management Act (2005) and the NDMA Guidelines for Hospital Safety (2016); in short, they illustrate cases of implementation going wrong.

Hospitals are vulnerable to internal and external disasters since they are exposed to compound inherent risks. For example, the vast amount of electrical equipment present combined with the lack of adequate fire safety equipment can jeopardize an already vulnerable facility. They are also prone to hazards and accidents related to various chemical, radioactive and physical materials or equipment stored on the premises. The increased prevalence of natural disasters further adds to their vulnerability; climate change, overexploitation of natural resources and unplanned urbanization are resulting in an increase in the frequency and intensity of natural disasters. In this context, it may be noted that different parts of India are highly vulnerable to earthquakes, droughts, floods, cyclones, landslides and avalanches, exposing the hospitals located in these regions to the risk of these disasters as well. The ongoing Covid-19 pandemic has overtly exposed the vulnerability of Hospitals and Health Care facilities towards biological disasters, be it natural or manmade.

Disasters in hospitals not only have grave economic implications in terms of the investment required to reconstruct buildings and restore damaged equipment, but they also affect healthcare delivery and create social challenges. The health impact may result from lacunae in the public health response and lapses in the medical care provided to victims. The social impact is a loss of confidence and morale in the affected community and the resulting gap between the formal system and communities.

The Bhuj earthquake, which took place on 26 January 2001 in the Kutch district of Gujarat, is an example of how much damage a hazard can cause. Measuring 6.9 on the Richter Scale as per the Indian Meteorological Department and 7.7 as per the US Geological Survey, this earthquake was one of the worst in 180 years. It brought down a significant share of the buildings and structures of the Kutch district and caused the death of over 19,000 people in Gujarat, with 17,000 casualties in Kutch alone (Paul, 2013). In terms of health infrastructure, the earthquake brought down all health facilities, including Hospitals, Primary Health Centres and Dispensaries in Kutch, killing many patients, their families and hospital staff. For instance, the 44-year-old Civil Hospital in Bhuj, which had 250 beds, collapsed, killing around 150 patients. Smaller hospitals faced similar fate (Sharma, 2001).

While an increasing number of hospitals in the country are becoming sensitized to the need to have an HDMP, many are not equipped to develop them in-house. Further, even if a hospital does have a plan, most of its frontline workers and stakeholders who are supposed to implement it are not even aware that the plan exists. Mock drills are virtually absent in rural and small urban hospitals.

This Hospital Safety Initiative adopts a "multi-stakeholder" and "management" approach to Hospital Safety by designing four different training modules for four different categories of Hospital Stakeholders thereby addressing the training needs of all stakeholders from the top to the bottom of the pyramid. The modules have been customized for the four groups based on their specific roles and responsibilities. The modules pay equal attention to technical content related to Hospital Safety and Disaster Management as well as practical implementation and management aspects. Thus, for instance, the modules cover technical information related to the HDMP, but they also focus on who should design it, how it should be drafted, implementation challenges and strategies to ensure implementation.

The four modules have been designed to train hospital stakeholders from all types of hospitals irrespective of their size (small, medium or big), undertaking (public, private or joint), the scope of work (multi-specialty or single specialty) or geographical location (rural or urban).

1.1 Structure of the Module

The overview section provides general information about who should use this manual, how to use it, the learning objectives (session-wise) for participants, guidelines for trainers/facilitators, a brief overview of what the modules cover and the training approach to be used.

1.1.1 Session Plan and Instructions

This section provides a detailed day-wise session plan/agenda for the stakeholder group; a description of the teaching plan, learning objectives, materials required for each session and the suggested pedagogy; specific instructions on how to commence and conduct each session and its expected outcomes. It also provides starting points for discussions and details on how group exercises and activities can/should be conducted. However, this section does not contain the Trainers' Notes, i.e., the technical teaching material. Since the teaching content/material is common for all stakeholder groups, they are provided separately in a booklet titled ***"Modules for Training Hospital Stakeholders on Hospital Safety: Trainers (Technical) Notes."***

Though the modules are organized in a particular order, trainers/facilitators can exercise their discretion in how they use it according to the varying needs of each set of participants and their specific context. Each session's module and sub-modules can also be used either in the order presented, on their own, or in combination with another session in case of time constraints or other factors that require adaptation.

Similarly, while the estimated timings and duration for sessions are offered, trainers can modify the length of each session to fit the total time available and based on the group's level of experience and expertise.

1.1.2 Trainers' Notes for Modules

As discussed above, the topics to be covered for all the stakeholder groups are largely the same and hence are provided as common trainers' notes in a separate booklet, which can be used across the four groups. Only the discussion sessions for each group will vary based on their specific roles and responsibilities. The training module for each stakeholder group thus elaborates on the discussions and activities to be conducted with each group separately. This module lays down the entire training plan for the Hospital Disaster Management (HDM) Basic Group i.e., Frontline Staff and Nurses.

1.2 Supporting Material

All the supporting material to be used for training is provided in the annexures or as a separate link (in case of audio–visual material). The supporting material shared in the annexures includes mainly mini case studies, Information, Education and Communication (IEC) material, links to reference material and group exercises.

1.3 How to Use This Manual

The training module covers the content for a two-day long workshop (eight hours per day, excluding breaks) with about 5–7 main sessions per day for the 'HDM Basic' group.

The duration of the workshop may be altered based on participants' requirements and time availability. For instance, if the program is being organized in-house and the specific group does not have a full day available, the day's sessions may be covered over two days. Some extra supporting material is also provided in case the training personnel prefer to use one type of material over another, e.g., case studies/scenarios over the Trainers' Notes.

The modules and training material have been designed keeping in mind the context, local culture and language most popularly used in India. The material may be translated into the local state language if the NDMA, the concerned State Disaster Management Authority (SDMA) or local hospitals deem fit. However, it must be ensured that the translation does not change the meaning of the content. Most of the material, especially the cases and other IEC material, has been designed to provide fair representation to the different states of the country or at least different geographical locations.

1.4 Intended Users of This Manual

This manual, including its modules and the supporting material, is simple and easy to use. It can be used by trainers working in the area of crisis/emergency/Disaster Management (DM) in the following settings:

1. Internal trainers in hospitals
2. External trainers at hospitals who work either privately or with central and state government authorities in the field of disaster relief.
3. Academic institutions, such as the Indian Institute of Management, which provide training and management development programs.
4. Officials or Faculty from central-, state- and district-level institutions who are working with hospitals or in other healthcare settings pertaining to disaster relief.

Other than trainers, these modules may also be useful as learning resources for individuals who are interested and want to advance in the field of DM, especially those who are focusing on implementation aspects in hospital/healthcare settings.

1.5 Learning Objectives for the Participants

The broad objective of designing these modules was to create uniform and standard training material that can be used to strengthen Hospital Safety practices across India by strengthening the capacities of multiple stakeholders. These modules will make them aware about (a) the disasters and different disaster scenarios a hospital can face; (b) the organization's (hospital's) prevention and response strategy; and (c) the roles of different stakeholders in the prevention and response strategy.

1.5.1 Specific Objectives

After attending a training program on Hospital Safety, the stakeholders will be able to:

- Understand the different types of disasters and various concepts related to DM including the Disaster Management Cycle (DMC) and related processes.
- Have insights into Policies, Acts and Guidelines related to Hospital Safety and determine how they can be applied in their place of work.
- Be aware of the components of a Hospital Safety Assessment.
- Appreciate the relevance of a 'Culture of Safety' in implementing Hospital Safety.
- Design and implement a HDMP for their hospital and examine its robustness and practicality.

- Design processes for ensuring the proper implementation of the HDMP and deal with pragmatic implementation issues.
- Understand the relevance of IT, Communication and Networking as facilitators of Hospital Safety.

The modules cover topics based on the matrix outlined in the NDMA guidelines for capacity building of diverse stakeholders.

1.6 Training Approach and Teaching Aids

The modules and training delivery plan were developed based on the principles of adult learning theory. Thus, the sessions are designed to be highly participative, as suggested by Knowles, the founder of this theory (Knowles, 1973). The program will be relevant and useful to participants only if they feel that the information can help them realistically find solutions to problems that expose their hospital to risks, if it adds to what they already know and if they are proactively involved in the process of learning (National Research Council, 2000).

Accordingly, the module topics, content and teaching methods have been tailored to suit the training needs and requirements of the four different stakeholder groups. While the supporting material may be the same for the different groups, the discussions and presentations have been designed to focus on each group's specific roles and responsibilities in the hospital and the contribution they can make to Hospital Safety.

The teaching aids used include:

1. Hand-outs to be used as part of the IEC material
2. Audio–visual aids in the form of short movies or video clippings
3. Case studies with teaching notes
4. Group exercises
5. Links to reference material such as Guidelines, Acts, Policies, etc.

The trainers can prepare PowerPoint presentations using the Trainers' Notes provided to aid their teaching.

1.7 Tips for Trainers/Facilitators

For the training sessions to be interesting, insightful and relevant for the participants, a few suggestions are provided for the trainers:

1.7.1 Preparing for the Workshop

1. This training is best conducted by two trainers per stakeholder group if possible. The trainers can take turns conducting the sessions as this will prevent monotony and fatigue in the trainers as well as the participants. Each trainer can choose to be an enabler in the session if they are not leading the session as the main trainer.

2. Each workshop should not have more than 20–25 participants. A larger group will prevent one-to-one interactions and limit the involvement of every participant.
3. It would be ideal for the trainers to be well-versed with the modules, supporting material and other reference material provided or mentioned in the modules.
4. The trainers should ensure that all the printed materials/resource materials/ hand-outs, such as the session plan, pre and post-test survey tools, IEC material and cases which have to be shared with the participants, are sequentially arranged in a separate folder/file for each participant. A checklist of the same can be prepared to ensure that no printed material is missing from any of the participant's files/folders.

1.7.2 Conducting the Workshop

1. Having prior information about the participants, their hospital/department and the nature of their work will help trainers form a rapport with the participants.
2. Each training session should be made as interactive as possible. An attempt should be made to involve all participants in the discussions.
3. While participants should be encouraged to express their point of view, long discussions on any one topic should be avoided. The questions and answers segment should be scheduled for the end of the session. The doubts of individual participants that need detailed discussion can be clarified during the lunch or tea break.
4. The information should be presented in a crisp and clear manner in a medium of instruction that all participants can understand.
5. The flow of dialogue should seamlessly and systematically move from one sub-topic to the other by clearly linking them so that no sub-topic is abruptly introduced.

Session Plans and Instructions for HDM Basic Group

2. Session Plans and Instructions for HDM Basic

A two-day training workshop is proposed for Nurses and Frontline Staff. As mentioned earlier, while there is a time duration proposed for each topic, trainers can modify the timelines based on the workshop timings and time available.

The learning objectives and expected outcomes of the workshop have also been shared by sub-topic for each stakeholder group. Further, a possible structure for the sessions is provided, including suggestions on how the trainer can commence each session, the specific group activities involved and the teaching material that is to be used.

During each session, the trainer can refer to the Trainers' Notes, which provide technical and theoretical notes on the topic. The Trainers' Notes are shared as a separate booklet and are common for all the stakeholder groups. Information pertaining to the cases and other material to be used for each session are also shared in each session plan. Accordingly, the discussions will be conducted from the perspective of the concerned stakeholder group so that they can provide insights into their specific context and roles and thus the contributions they can make to enhance Hospital Safety. It is important to mention at this point that the whole of the Trainers' Notes may not be relevant for every stakeholder group. The trainer must use only the sub-topics that match the learning objectives of a group.

2.1 Session Plan for Day 1: Disasters and Disaster Management, Standard Operating Procedures and Culture of Safety

Table 1 provides details on the timelines, main topics and sub-topics of the workshop based on the learning objectives for this stakeholder group.

Table 1: Timelines, Main Topics and Sub-topics for Day 1 for Frontline Staff

Session	Time and Duration	Topic	Sub-Topics/Agenda
1.	1 hour (9.00 AM – 10.00 AM)	Introduction and Understanding Decision-making during Disasters: Ice-breaking	1. Introduction of trainers 2. Introduction of participants 3. Introduction to the purpose of the workshop (relevance of the topic, ground rules for the workshop, expectations of participants, etc) 4. Baseline survey (Annex 1) 5. Group exercises – ice-breaking activities

Session	Time and Duration	Topic	Sub-Topics/Agenda
2.	1 hour 30 mins (10.00 AM –11.30 AM)	Description of Disasters, Epidemiology and Disaster Management	1. Key concepts explained – disasters, hazards (single and multi), risk, vulnerability, capacity, etc. 2. Types and classification of disasters 3. Role of climate change, human errors and other factors in disasters
BREAK (11.30 AM – 11.45 AM)			
3.	1 hour (11.45 AM – 1.00 PM)	Disaster Management Cycle (DMC) and Disaster Risk Reduction (DRR)	1. Understanding DMC 2. Public health implications of disasters (response and recovery phase) and vulnerable populations 3. Role of hospitals in every stage of the DMC 4. Role of hospitals in DRR 5. Challenges faced by hospitals during disaster preparedness and management
LUNCH BREAK (1 PM – 2 PM)			
4.	2 hours (2 PM – 3.30 PM)	Relevance of Standard Operating Procedures (SOPs)	Group exercise
5.	1 hour (3.30 PM – 4.30 PM)	Hospital Disaster Planning: The Role of SOPs in DM in Hospitals	1. Understanding the expected disaster scenarios for hospitals 2. Concept and importance of SOPs 3. Familiarization with the hospital SOP 4. Understanding the implications of non-compliance
BREAK (4.30 PM – 4.45 PM)			
6.	1 hour 45 mins (4.45 PM – 6.30 PM)	Culture of Safety	1. Introduction to the Concepts: a. 'Culture of Safety' in Hospitals. b. Psychological Safety and its benefits c. Hospital Resilience and its Importance – How Staff and Hospital Resilience can be Developed d. High Reliability Organizations (HROs) and their Characteristics; Hospital as an HRO

2.2 Session-wise Guidelines for Day 1

2.2.1 Session 1: Introduction and Understanding Decision-making during Disasters: Ice-breaking

This session will be the same for the four stakeholder groups and thus is shared as a separate, common section (Section 1 of Trainers' Notes). Tool for the baseline survey that will be conducted in this session is shared in Annex 1, Part A.

2.2.2 Session 2: Description of Disasters, Epidemiology and Disaster Management

Learning Objectives of the Session

1. To familiarize participants with key concepts related to DM such as disaster, hazards (single and multi), risk, vulnerability, capacity, etc.
2. To inform participants about the types of disasters and their classification.
3. To discuss the role of climate change, human error and other factors in disasters.

Preparation, IEC and Pedagogy

Materials needed at venue	A white board and markers, projector (for documentary movie screening), laptop and pen drive
Hand-outs/resource material	Hand-out 1: Basic terminology linked to disasters and disaster management (https://www.unisdr.org/files/7817_UNISDRTerminologyEnglish.pdf) Hand-out 2: Hazard Vulnerability Map of India (Annex 2)
Pedagogy	Movie/documentary screening Discussion on the movie Trainers' notes for technical information PPT based on trainers' notes (optional)

Guidelines for Conducting the Session

Starting the Session (10 minutes)

The session can begin with questions such as, "*What is your understanding of a disaster?*" and/or "*Have any of you encountered a disaster/crisis or an emergency in your life or in your place of work*?"

The answers received can form the basis for introducing the participants to the purpose of the session and the intended takeaways. Some of the participants may be well-versed on the topic, and they can be asked to contribute their knowledge to the session.

Main Session (60 minutes)

- Start the main session by showing a 15-minute documentary on disasters provided with the manual. The movie will cover information related to types of disasters and discuss the concepts of hazards (single and multi), risk, vulnerability and capacity and an interview of an expert on disasters.
- The movie will be followed by a discussion with the participants to review the concepts and provide the necessary context. The Trainers' Notes can be used to add technical information to make the concepts clearer. This will sensitize participants to the different aspects of handling a disaster.
- Discuss the Multi-hazard Map of India (Annex 2) to give participants an idea about states' vulnerability to different types of natural hazards.

Question and Answer Round (20 minutes)

The session can end with a discussion on participants' questions and doubts.

Expected Outcome

By the end of the session, participants will have a clear idea about the different types of disasters and the key concepts of DM including hazard, risk, vulnerability, and capacity. They will be able to identify how hazards turn into disasters. They will also be aware of the kinds of disasters which their state is vulnerable.

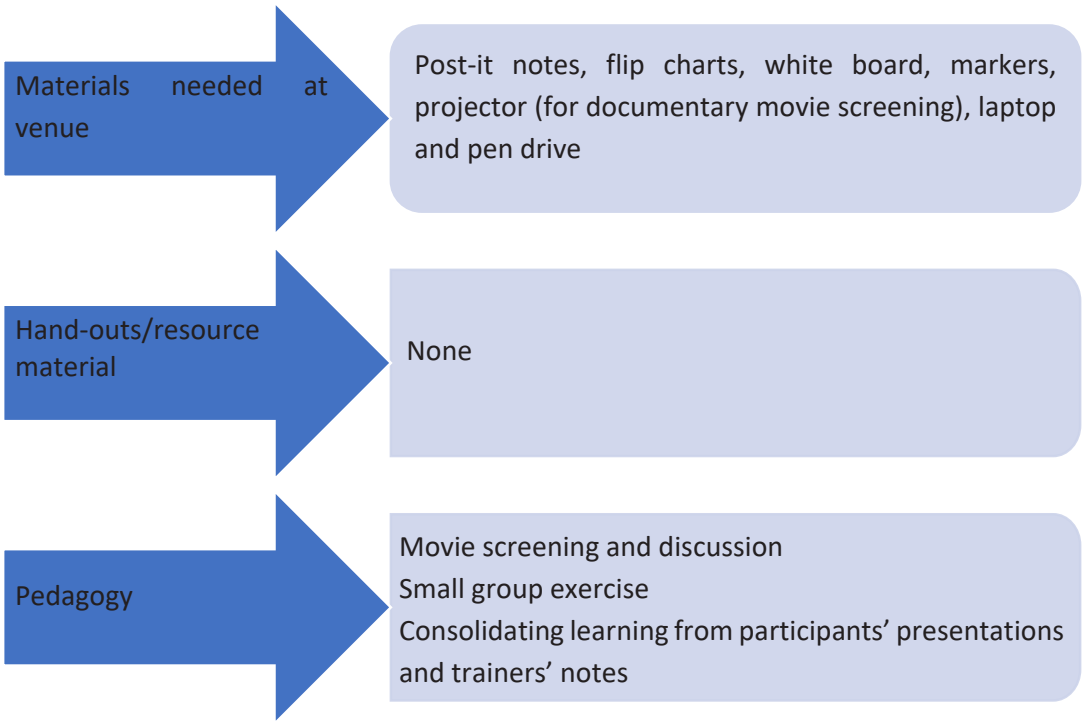
2.2.3 Session 3: Disaster Management Cycle and Disaster Risk Reduction

Learning Objectives of the Session

1. To enable participants to understand the Disaster Management Cycle (DMC).
2. To sensitize participants to the application of the DMC vis-à-vis emergency response in the hospital setting and the role of the hospital in Disaster Risk Reduction (DRR).
3. To enable them to recognize which people are most vulnerable to disasters.
4. To enable them to understand health implications in the response and recovery phases of the DMC.

5. To highlight the relationship between development and disaster (dwelling on topics such as climate change and its impact on changing disaster scenarios.)

Preparation, IEC and Pedagogy



Guidelines for Conducting the Session

Starting the Session (5 Minutes)

The session can commence with the trainer asking a question such as, "*Does anyone know why disaster management involves a cyclic process?*" or" Is *anyone aware of the different phases in the DMC?"* and *"How is development related to disasters (probing on aspects such as climate change and its role in bringing about heatwaves and forest fires etc).*

The trainer can note the answers received (but not discuss them in detail at that point) and then show a small video clip on the DMC that has been shared as resource material along with the manual.

Main Session (50 Minutes)

a. **Discussion on the DMC (15 minutes):** The trainer can use the video and the answers given by the participants as any entry point for explaining the DMC and elaborating on the four phases: (1) Mitigation, (2) Preparedness, (3) Response, and (4) Recovery. The relevance of planning, rehabilitation and provision of psychosocial care will also be touched upon.

b. **Exercise on the role of the hospital in DMC and DRR (15 minutes)**: Next, the participants can be divided into three groups. Each group will be asked to prepare a concise five-minute presentation on:

- The health implications for the general population at every stage of DMC.
- Whom they think the most vulnerable populations (e.g., the elderly, children, differently-abled) are and if they need any special care.
- The role that hospitals can play at various stages of the DMC as part of healthcare provision and DRR.

c. **Presentation by participants and discussion (20 minutes)**: Three presentations of five minutes each will be made by the participant groups. It must be noted that this topic is theoretical as well as experiential. With all participants being healthcare professionals, they will already have an idea about their role in the DMC and many of them may have experiences related to handling emergencies and mass casualty events. Therefore, an attempt should be made to make this session highly interactive and filled with experience-sharing.

The trainer will then recapitulate all the information received from the three presentations and any relevant points that had been missed out (from the Trainers' Notes)

In the main session, a PowerPoint presentation (PPT) may also be used as teaching material.

Question and Answer Round (5 Minutes)

All questions and doubts can be reserved for this round, which concludes the session. Since the session involves a small group activity and is highly interactive, there may not be many questions for the end.

Expected Outcome

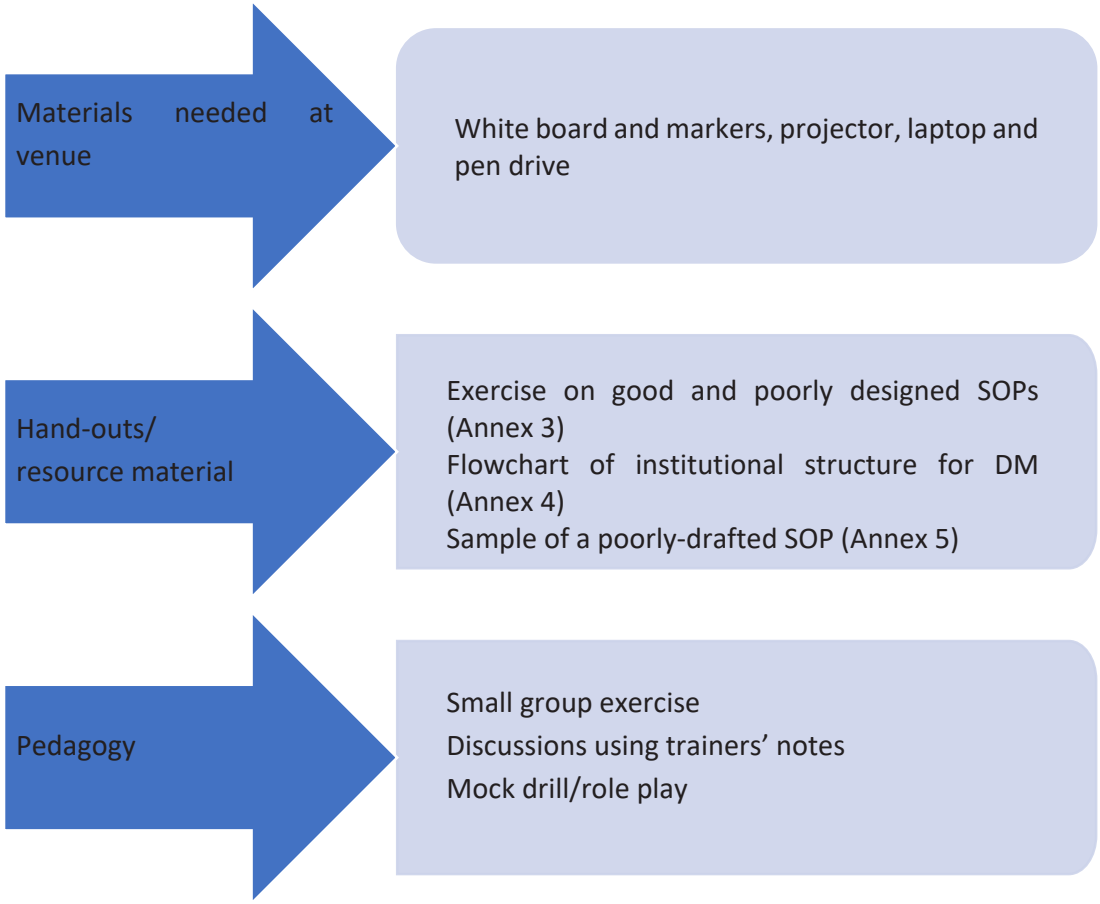
By the end of the session, participants would have a clear understanding of the DMC and the crucial role that hospitals can play in the phases of disaster mitigation, preparation, response and recovery (including rehabilitation).

2.2.4 Session 4 and Session 5: Hospital Disaster Planning: The Role of Standard Operating Procedures (SOPs) for DM in Hospitals

Learning Objectives of the Session

1. To make participants aware of the concept and importance of SOPs, especially in the context of DM.
2. To familiarize participants with the existing hospital SOP.
3. To sensitize participants to the implications of non-compliance.

Preparation, IEC and Pedagogy



Guidelines for Conducting the Session

The topic of SOPs will be covered over two sessions – Sessions 4 and 5. The combined time duration allocated for these two sessions is three hours. Session 4 will be for two hours post-lunch and is activity-based. Session 5 is for one hour and is theoretical.

Session 4: Group Exercise (2 Hours)

An exercise will be presented to the participants in which they have to enact a mock situation. The exercise is shared below. It will be followed by a debriefing session.

- **Exercise (1 Hour 15 Minutes)** (Note: 15 minutes is allocated to forming groups and giving instructions. One hour is allocated to the main exercise.)

Participants will be divided into three groups. Two groups will be given a mock situation where there is a fire in their hospital and the third group will be the observer. The first two groups will be given half an hour each to complete the exercise. They have to simulate a disaster response situation using the SOP provided to them. One group (Group A) will be given a poorly designed SOP and the other group (Group B) will be given a clearly drafted SOP. The detailed objectives of this exercise, method and activity plan is shared in Annex 3 along with the poorly drafted and clearly drafted SOPs.

- **Debriefing (45 minutes)**

The group exercises and their learning outcomes will be discussed. Through the discussions, participants will be encouraged to reflect on the relevance of SOPs for DM. The observer group will be asked to shed light on how the other two groups could have done better and also share their opinion about which group performed better. Thereafter, the trainer will refer to the documentary on disasters shown in Session 2 to remind the participants about the different types of hazards and disaster situations. Hospitals need to be prepared to face every disaster situation, and SOPs can facilitate timely, quick and well-planned interventions.

Session 5 (1 hour)

- **Starting the Session (20 minutes)**

Start the session by asking the participants if they are aware of any SOPs that are being used by their hospitals and, if so, what their purpose is. The participants' responses along with the activity conducted in Session 4 can pave the way for a discussion on SOPs and their purpose and relevance for hospitals. In particular, the relevance of SOPs for DM and the implications of non-compliance can be discussed using the Trainers' Notes and by linking them to the activity. Details about the institutional framework for DM from the central to state levels will be shared with participants (as a hand-out-Annex 4) so that they are aware of whom they can approach for help should the need arise. The same should be covered in the SOPs for DM as well.

- **Main Session: Group Activity (30 minutes)**

A small activity of about 20 minutes will be conducted to enable the participants to understand how to distinguish between a well-designed and poorly designed hospital SOP.

Participants will be given a hospital SOP for DM that is poorly designed (Annex 5). Based on learning from the previous exercise, they will be asked to share their feedback on the SOP and identify the lacunae.

The participants will be encouraged to discuss and reflect on the design and content of the SOP and share how they think it can be strengthened.

- **Question and Answer Round (10 minutes)**

All questions and doubts of the participants can be reserved for this round, which concludes the session.

Expected Outcome

By the end of the session, all participants should have a clear idea about what hospital SOPs are and why they are required for DM. The implications of non-compliance with SOPs should also be understood.

2.2.5 Session 6: Culture of Safety

Learning Objectives of the Session

1. To inform participants about what a 'Culture of Safety' is in a hospital setting and its interlinkage with (1) Psychological Safety, (2) resilience, and (3) High Reliability Organizations (HROs).
2. To create awareness about the benefits of Psychological Safety and offer guidelines how to create an environment of Psychological Safety.
3. To acquaint participants with the idea of hospital resilience and its importance.
4. To encourage participants to reflect on how staff and hospital resilience can be developed.
5. To make participants aware of the significance of high reliability and why hospitals are HROs.

Preparation, IEC and Pedagogy

Materials needed at venue	White board and markers, projector, laptop and pen drive
Hand-outs/resource material	Small Case on Psychological Safety (Annex 6)
Pedagogy	Case discussion Trainers' notes for technical information PPT based on trainers' notes (optional)

Guidelines for Conducting the Session

Starting the Session (10 minutes)

The trainer could start with any one of the following questions:

1. *Do you feel comfortable raising concerns with the seniors in your hospital? Why or why not?*

2. *Have you ever tried to go against the work culture of your hospital? Why did you do it and what was your learning from the experience?*

The answers could be used as an entry point for introducing the concepts of 'Culture of Safety' and Psychological Safety. The participants' answers are also likely to highlight the role of communication in building a 'Culture of Safety'.

Main Session (1 hour 20 minutes)

a. **Culture of Safety (20 minutes):** The trainer can use the Trainers' Notes (and a PPT) to explain the concept of 'Culture of Safety' and the factors that help it thrive in a hospital. Its relevance to a hospital, especially for DM, can be discussed interactively.

b. **Psychological Safety (20 minutes):** The trainer can start by sharing a small case on Psychological Safety (Annex 6) or by doing enacting a small brief role-play on the same. They can then move on to an interactive discussion with the participants on the relevance of Psychological Safety for Hospital Safety. Factors that can affect, hinder or foster Psychological Safety can be reflected upon during the case discussion. The trainer can start by asking the participants to reflect on how Psychological Safety can be fostered. They may come out up with good suggestions that can be noted by the trainer on the white board. At the end, the Trainers' Notes can be referred to for any missing points.

c. **Resilience (20 minutes):** Here as well, the trainer can use the Trainers' Notes to explain the concept of resilience and its relevance for Hospital Safety. The discussion can move onto factors that enhance staff and hospital resilience. The class can be made lively and interactive by asking the participants to share their thoughts on the topic. Thereafter, the Trainers' Notes can be referred to add any points that were missed.

d. **High Reliability Organizations (20 minutes):** The trainer can then use the Trainers' Notes to reinforce the characteristics of HROs and why a hospital should be an HRO.

Question and Answer Round (15 minutes)

The main session will be followed by a question-and-answer round in which any doubts the participants have related to the above topics will be clarified.

Expected Outcome

By the end of the session, participants should have a clear understanding about what a 'Culture of Safety' is and why is it crucial for Hospital Safety, including patient, staff and structural safety. They will also be aware of Psychological Safety, Resilience and High Reliability as components of a 'Culture of Safety'.

2.3 Session Plan for Day 2: Hospital Safety, its Assessment and Relevance of a Hospital Disaster Management Plan (HDMP)

Table 2 details the timelines, main topics and sub-topics for Day 2, based on the learning objectives for this stakeholder group.

Table 2: Timelines, Main Topics and Sub-topics for Day 2 for Frontline Staff

Session No.	Times and Duration	Topic	Sub-Topics/Agenda
1.	30 minutes (9.00 AM –9.30 AM)	Recap of Day 1	Revision of Day 1 topics
2.	2 hours (9.30 AM –11.30 AM)	Hospital Safety and its Assessment	1. Understanding Hospital Safety 2. Context, relevance, aim and components (structural, non-structural and functional) of Hospital Safety 3. Priority areas for safety 4. Assessing Hospital Safety
BREAK (11.30 AM – 11.45 AM)			
3.	1 hour 30 mins (11.45 AM –1.15 PM)	Introduction to Hospital Disaster Management Plan (HDMP)	1. Concept of HDMP 2. Legal and policy context 3. Aim and basic principles of HDMP 4. Need for staff awareness and familiarization with HDMP and Hospital Incident Response System (HIRS)
LUNCH BREAK (1.15 PM – 2. 00 PM)			
4.	2 hours (2.00 PM –4.00 PM)	Relevance of Mock Drills	Group exercise (simulation)
5.	1 hour 30 mins (4.00 PM –5.30 AM)	Monitoring and Compliance: Human and Design Errors Leading to Internal Disasters	1. Concept of Compliance and Monitoring 2. Minimum standards for compliance for hospitals under the Clinical Establishments (Registration and Regulation) Act, 2010 3. Consequences of non-compliance with Hospital Safety norms 4. Understanding the different dimensions of 'errors' – people, processes and systems
BREAK (5.30 PM – 5.45 PM)			
6.	45 minutes (5.45 PM –6.30 PM)	Summary and Conclusions (including post training feedback)	

2.4 Session-wise Guidelines for Day 2

2.4.1 Session 1: Recap of Day 1

This is a brief 30-minute session that will be conducted to revise the topics of Day 1. The discussions in this session will help the participants link the concepts learned on Day 1 to workplace realities.

2.4.2 Session 2: Hospital Safety and Its Assessment

Learning Objectives of the Session

1. To make participants understand the concept of Hospital Safety and the need for it.
2. To sensitize participants to the context and aim of Hospital Safety.
3. To familiarize participants with the components of Hospital Safety and its assessment using the Hospital Safety Index checklist.
4. To introduce participants to the priority areas for Hospital Safety.
5. To enable participants to understand how a Hospital Safety Assessment can be done.

Preparation, IEC and Pedagogy

Materials needed at venue	A white board/flip chart and markers Projector, laptop and pen drive
Hand-outs/ resource material	Small case study on hospital fires (Annex 7) Hospital Safety Checklist (Form 2 of the Hospital Safety Index Evaluation Forms prepared by WHO under the Safe Hospitals Initiative) Link: https://www.who.int/hac/techguidance/preparedness/hospital_safety_index_forms.pdf
Pedagogy	Case discussion Group activity Trainers' notes for technical information PPT based on trainers' notes (optional)

Guidelines for Conducting the Session

Starting the Session (10 minutes)

The session may start with the trainer asking the participants two questions on Hospital Safety, such as *"What is a safe hospital?"* and *"How can Hospital Safety be ensured?"*. The participants can be asked to write their replies on a sheet of paper and submit it to the trainer within five minutes.

One of the participants can be asked to help the trainer in categorizing the responses, and the trainer can then write the frequency of each category of response received on the white board/flip chart. This will help in understanding how well-versed participants are with the topic of discussion.

Group Discussions (20 minutes)

The trainer can then use a PPT or the Trainers' Notes to discuss the concept of Hospital Safety, the need for it and its historical background (Hyogo Framework, etc.), aim and components. The participants' responses will also be discussed so that they get feedback about how well they are acquainted with the concepts.

Case Discussion (35 minutes)

The participants will be given a mini case study on hospital fires for discussion (Annex 7). About 10 minutes will be provided for reading and understanding the mini case study. This will be followed by a case discussion for 25 minutes. The discussion will focus on questions such as: (1) Which type of disaster took place? (2) Were Hospital Safety norms flouted, and, if so, which aspects? (3) What could the authorities have done to avert the disaster?

Group Activity on Hospital Safety Assessment Checklist (45 minutes)

The participants will be divided into three small groups of 7–10 participants. They will be given 15 minutes to go through the Hospital Safety Index developed by WHO, provided to them as resource material through a website link (and soft copy of the same). This will facilitate an in-depth understanding of every component of Hospital Safety and how to assess it. Over the next 20 minutes, the group members will have an internal discussion to identify five action points that its members can immediately implement in their workplace to ensure their hospital's safety. In the last 10 minutes, one member from each group will share these five action points. This small exercise will enable participants to understand the perspectives of the others in the group and will also help them link theory to workplace practices.

Question and Answer Round (10 minutes)

In the last 10 minutes of the session, any queries that the participants may have will be resolved.

Expected Outcome

By the end of the session, participants will be well informed about what Hospital Safety is, why is it crucial, and how can it be assessed. They will have a clear idea about how they can contribute to the safety of their own hospital.

2.4.3 Session 3: Introduction to Hospital Disaster Management Plan

Learning Objectives of the Session

1. To familiarize participants with the concept of an HDMP. To sensitize participants to the legal and policy context of HDMPs.
2. To help participants understand the aims and basic principles of an HDMP.
3. To make participants aware of the importance of being familiar with HDMPs and HIRS and their contribution/role when the plan has to be activated.

Preparation, IEC and Pedagogy

Materials needed at venue	White board/flip chart and markers, projector, laptop and pen drive
Hand-outs/resource materials	SOPs for fire, earthquakes, biological, chemical, nuclear, and radiation disasters. *Note: All the SOPs are shared as a separate folder of resource material)*
Pedagogy	Trainers' notes for technical information Interactive Discussions in form of guided question and answers PPT based on trainers' notes (optional)

Guidelines for Conducting the Session

Starting the Session (20 minutes)

The session could start with the trainer asking the participants if they know of any HDMPs that have been designed and put to use in their hospitals. Their answers can be used to guide the discussion. If some of the participants are aware of the HDMP of their hospital or have handled disasters, they can be encouraged to share their experience.

Main Session (60 minutes)

This session will be interactive in nature. The trainer can make use of the Trainers' Notes as well as a PPT and discussions (guided questions and answers) to teach the participants about HDMPs and all the points mentioned under the learning objectives.

Question and Answer Round (10 minutes)

Like in all the other sessions, the last 10 minutes of the session will be dedicated to addressing any questions that the participants may have.

Expected Outcome

By the end of the session, participants will know what goes into making an HDMP and why it is important for them to be aware of their hospital's HDMP.

2.4.4 Session 4: Simulation Exercise

Learning Objective of the Session

1. To help participants understand the relevance of simulation exercises, like mock drills and tabletop exercises, as a means to prepare for a real-life disaster situation.

Group Activity

Practice exercises can be discussion-based or operations-based. Operations-based exercises such as mock drills are highly beneficial to prepare for disasters. However, in this training session, a simple simulation exercise will be conducted, which is the next best option, since it is not possible to do a full mock drill in a workshop venue.

Exercise (1 hour 15 minutes) (Note: 15 minutes is allocated for forming groups and giving instructions. One hour is allocated to the main exercise, with each group being given half an hour each.)

The participants will be divided into two teams of six. Remaining participants can act as adjudicators to observe the two teams and evaluate how they deal with the emergency situation presented to them (refer to Annex 9 for details of the situation, SOP provided and learning objectives of the exercise). The two teams, namely Team A and Team B, shall be handed out the same SOP. Both teams will be given five minutes to familiarize themselves with SOP.

Team B will be excused from the room while Team A executes the task. On completion of the task, Team B should be called for their turn. Lastly Team A will execute the same task again while Team B watches. The idea behind this is that through practice and observation, team A should be able to perform better the second time and execute the evacuation more efficiently. During de-briefing session, the class can discuss the difference of performance of both teams.

- **Debriefing (45 minutes)**

The tabletop exercises and their outcomes will be discussed. Discussions will focus on pinpointing problem areas and potential roadblocks to Hospital Safety in the given situation.

Participants will be encouraged to reflect on the relevance of practical/mock drills in a hospital setting. Many a time, a hospital may have SOPs and HDMPs in place, but without regular practice sessions, the staff may not be ready to respond to a disaster when it does strike. The observer group will be asked to provide feedback on how the other groups could have done better.

Expected Outcome

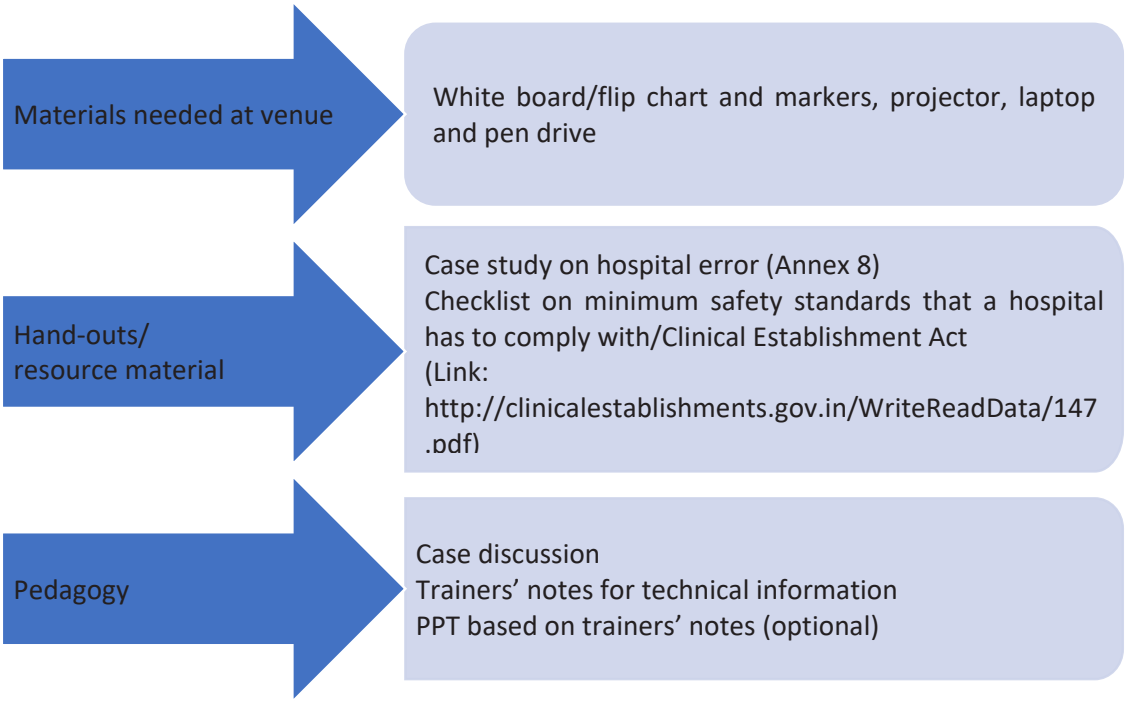
By the end of the session, all participants should be able to appreciate the dire need for regular mock drills and tabletop exercises to practise implementing their HDMP.

2.4.5 Session 5: Monitoring and Compliance: Human and Design Errors Leading to Internal Disasters

Learning Objectives of the Session

1. To help participants appreciate the concepts of Compliance and Monitoring as being crucial for Hospital Safety.
2. To familiarize participants with the mandatory requirements for compliance to the minimum standards laid down for hospitals under the Clinical Establishments (Registration and Regulation) Act, 2010.
3. To make participants aware of the consequences of non-compliance with Hospital Safety norms.
4. To enable participants to understand the different dimensions of 'errors' – people, processes and systems.

Preparation, IEC and Pedagogy



Guidelines for Conducting the Session

Starting the Session (30 minutes)

The session will start with the trainer providing technical information to the participants about Compliance and Monitoring and why they are essential for Hospital Safety. The Trainers' Notes will be used to guide the discussions. The participants will also be informed of the minimum prescribed safety standards for a hospital and the implications of non-compliance. Participant questions can also be addressed during this part of the session.

Case Discussion (1 hour)

The participants will be required to read and understand the case over 15 minutes. The next 45 minutes will be spent discussing the case, during which participants will gain insights into how people-, system- or process-related errors can lead to disastrous situations for a hospital.

Expected Outcome

By the end of this session, all participants should be able to appreciate the need for regular monitoring of the hospital and its facilities for Hospital Safety. They will also be sensitized to taking matters of compliance seriously, especially since lives are at stake when compliance norms are disregarded in their profession.

2.4.6 Session 6: Summary and Conclusions

This is a 45-minute session which can be broken down into two parts discussed below.

Summarizing the Sessions

The purpose of this session is to have a quick recap of all the sessions conducted over the two days of the workshop. The best way to assess how much the participants have learned is to let individual participants volunteer to share a summary of each of the sessions, the key learnings they are taking away from the workshop, and how they plan to apply it in their place of work. About 30 minutes can be spent on this activity.

Post-training Survey and Feedback

In this concluding session, participants will be required to share their post-training feedback. Participants can be given 15 minutes at the end of the session to fill up the post-training survey and feedback form (Annex 1, part B). These can serve as useful feedback on the content of the workshop and how it was conducted. The feedback will help in improving the content and pedagogy of subsequent workshops on Hospital Safety.

Annex 1: Pre and Post Evaluation Training Tool

Part A

Pre-Training Evaluation

Your Name:

Your Hospital Name:

Your designation:

For the questions below, please tick on the option that you feel is correct:

1. A disaster occurs when:
   a. A sudden and unexpected incident/hazard occurs
   b. In case of Hazard + Vulnerability
   c. In case of Hazard + Vulnerability/Capability
   d. It can occur anytime

2. The hospital decontamination team performs monthly donning and doffing drills. These drills benefit the hospital decontamination team so they are able to reduce mistakes and readily respond in the case of an emergency. As part of Emergency Management, this is a part of which of the below phases?
   a. Response
   b. Preparedness
   c. Mitigation
   d. Recovery

3. What are the three phases of Disaster Management Planning?
   a. Preparation, Response and recovery
   b. Evacuation, Reconstruction and Re-branding
   c. Preparation, Planning and Visualizing
   d. Planning, Evacuation and Recovery

4. The likelihood of an undesirable event occurring within a particular period or under specified circumstances is known as:
   a. Vulnerability
   b. Risk
   c. Hazard

5. Which of the following systems which facilitate hospital safety may also be a source of disaster?
   a. Communication Systems
   b. Information Systems
   c. Monitoring systems
   d. None of the above

6. Which of the following is not a component of Structural Safety in a Hospital building?
   a. Foundation
   b. Pillars
   c. Ceiling
   d. Walls

7. The Hospital Incident Command System is:
   a. A Hospitals management structure
   b. A Standardized approach to incident management
   c. Viable solution to manage both planned events and unplanned incidents
   d. A and C
   e. B and C

8. A Hospitals Incident Response System should be active 24*7.
   a. True
   b. False

9. Who should be in charge of organizing catering services during a hospital incident?
   a. Planning Section Chief
   b. Operations Section Chief
   c. Logistics Section Chief
   d. Finance and Administration Section Chief

10. Who is in charge of deciding what actions have to be taken and about the strategic resources required while handling disasters?
   a. Planning Section Chief
   b. Operations Section Chief
   c. Logistics Section Chief
   d. Finance and Administration Section Chief

11. A hospital staff feels psychologically safe while working when:
    a. He/She is mentally relaxed with minimal stress
    b. She/he does not suffer from work related fatigue and pressure
    c. When she/he is able to share concerns about the hospital and its functioning with superiors
    d. When she/he is able to discuss with peers about all the good and bad things of the hospital.

12. For a hospital to be safe from disasters, it should be so well prepared and equipped that it does not need to take the help of any other hospital to handle its patients
    a. True
    b. False

13. The National Disaster Management Authority (NDMA) is headed by:
    a. President of India
    b. Minister of Home Affairs
    c. Prime Minister of India
    d. Governor of Delhi

OR

13. The Disaster Management Act was made in
    a. 2002
    b. 2003
    c. 2005
    d. 2008

14. Every Hospital in India has got standardised guidelines on Hospital Safety that it has to strictly adhere to, failing which, its license can be revoked.
    a. True
    b. False

15. Resilience of Hospital Staff contributes to Hospital Safety
    a. False
    b. True

Answer Key:

1. C, 2. B, 3. A, 4. B, 5. B, 6. C, 7. E , 8. B, 9.C, 10. B,

11. C 12. B, 13. C, 14. B, 15. B

Part B

Post-Training Evaluation and Feedback

Your Name:

Your Hospital Name:

Your designation:

For the questions below, please tick on the option that you feel is correct:

1. A disaster occurs when:
    a. A sudden and unexpected incident/hazard occurs
    e. In case of Hazard + Vulnerability
    f. In case of Hazard + Vulnerability/Capability
    g. It can occur anytime

2. The hospital decontamination team performs monthly donning and doffing drills. These drills benefit the hospital decontamination team so they are able to reduce mistakes and readily respond in the case of an emergency. As part of Emergency Management, this is a part of which of the below phases?
    a. Response
    b. Preparedness
    c. Mitigation
    d. Recovery

3. What are the three phases of Disaster Management Planning?
    a. Preparation, Response and recovery
    h. Evacuation, Reconstruction and Re-branding
    i. Preparation, Planning and Visualizing
    j. Planning, Evacuation and Recovery

4. The likelihood of an undesirable event occurring within a particular period or under specified circumstances is known as:
    a. Vulnerability
    k. Risk
    l. Hazard

5. Which of the following systems which facilitate hospital safety may also be a source of disaster?
   a. Communication Systems
   m. Information Systems
   n. Monitoring systems
   o. None of the above

6. Which of the following is not a component of Structural Safety in a Hospital building?
   a. Foundation
   b. Pillars
   c. Ceiling
   d. Walls

7. The Hospital Incident Command System is:
   a. A Hospitals management structure
   b. A Standardized approach to incident management
   c. Viable solution to manage both planned events and unplanned incidents
   d. A and C
   e. B and C

8. A Hospitals Incident Response System should be active 24*7.
   a. True
   b. False

9. Who should be in charge of organizing catering services during a hospital incident?
   a. Planning Section Chief
   b. Operations Section Chief
   c. Logistics Section Chief
   d. Finance and Administration Section Chief

10. Who is in charge of deciding what actions have to be taken and about the strategic resources required while handling disasters?
    a. Planning Section Chief
    b. Operations Section Chief
    c. Logistics Section Chief
    d. Finance and Administration Section Chief

11. A hospital staff feels psychologically safe while working when:
    a. He/she is mentally relaxed with minimal stress
    b. She/he does not suffer from work related fatigue and pressure
    c. When she/he is able to share concerns about the hospital and its functioning with superiors
    d. When she/he is able to discuss with peers about all the good and bad things of the hospital.

12. For a hospital to be safe from disasters, it should be so well prepared and equipped that it does not need to take the help of any other hospital to handle its patients
    a. True
    b. False

13. The National Disaster Management Authority (NDMA) is headed by:
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14. Every Hospital in India has got standardised guidelines on Hospital Safety that it has to strictly adhere to, failing which, its license can be revoked.
    a. True
    b. False

15. Resilience of Hospital Staff contributes to Hospital Safety
    a. False
    b. True

Answer Key:

1. C, 2. B, 3. A, 4. B, 5. B, 6. C, 7. E , 8. B, 9.C, 10. B, 11. C

12. B, 13. C, 14. B, 15. B

Post Workshop Feedback

I. How would you rate the workshop on a scale of 1 to 5 where:

1 = Poor

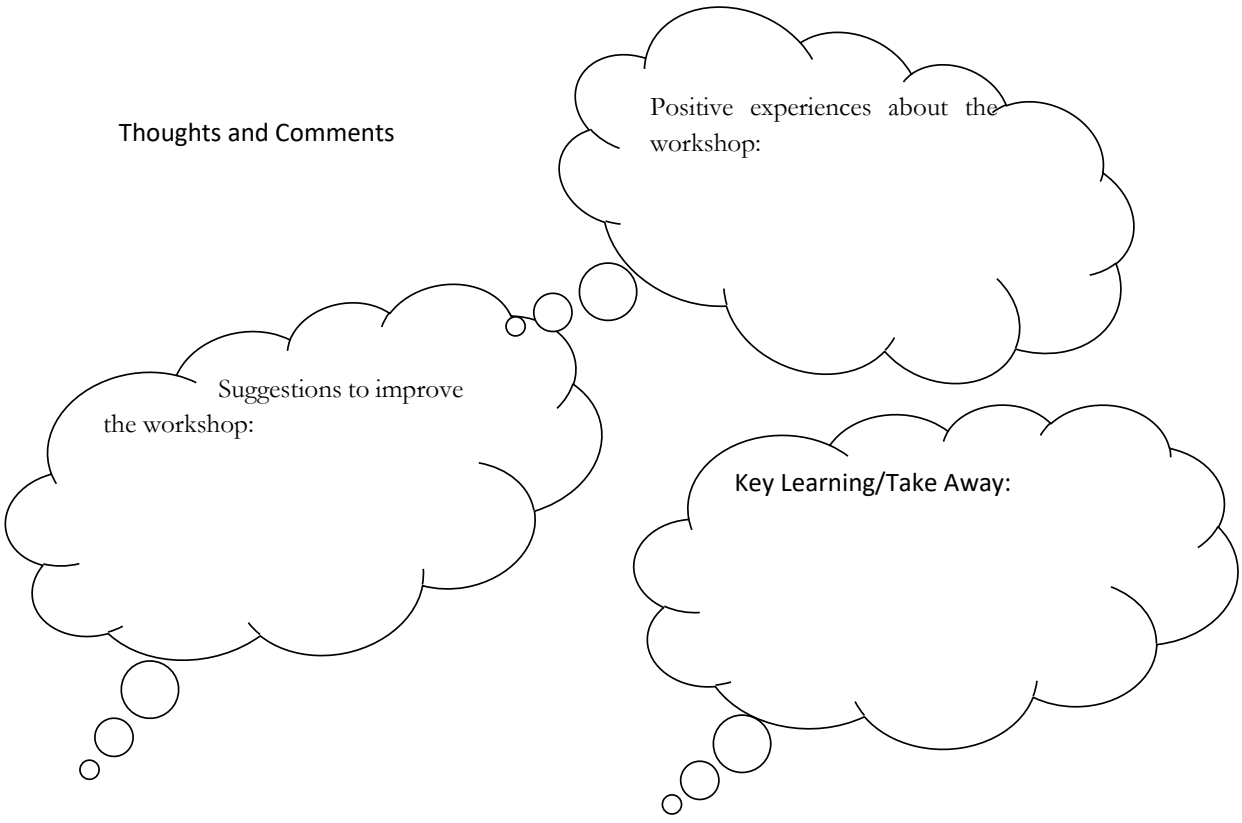
2 = Below Average

3 = Satisfactory

4 = Very Good

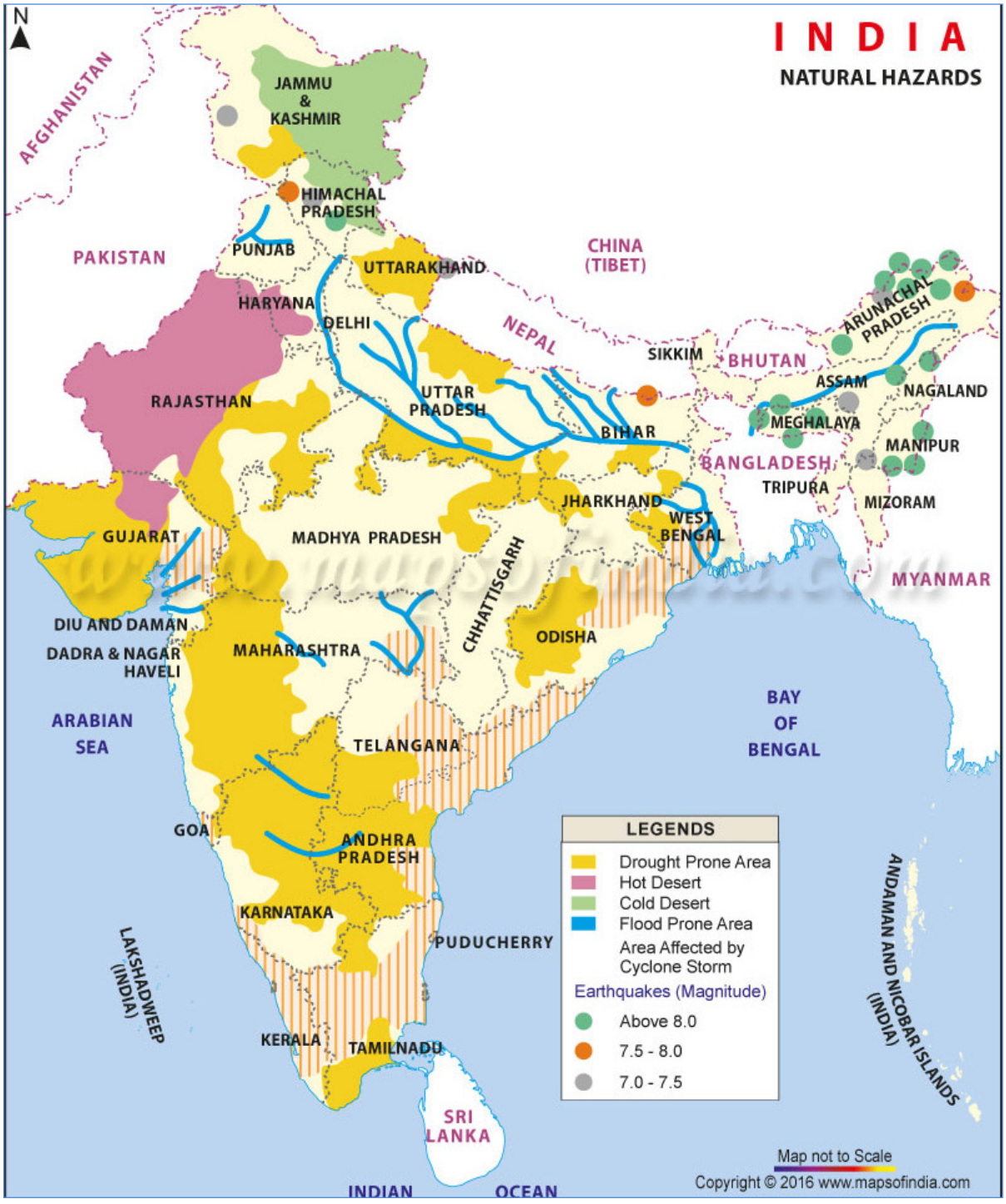
5 = Excellent

		Poor	Below Average	Satisfactory	Very Good	Excellent
1	Content of Workshop	1	2	3	4	5
2	Facilitators	1	2	3	4	5
3	Knowledge of Facilitators	1	2	3	4	5
4	Pedagogy used/ communication	1	2	3	4	5
5	Duration of workshop	1	2	3	4	5



Thank you for your Feedback

Annex 2: Natural Hazards Map of India



For a more detailed map on Natural Hazards and Disaster Risk Profiling, the Instructor may refer to the following link: https://nidm.gov.in/easindia2014/err/pdf/country_profile/India.pdf

Annex 3: Exercise on Importance of a Good SOP

Learning Objectives

1. To ensure participants are aware of the necessity of a thorough SOP for Hospital Safety and disaster management.
2. To enlighten participants about the pitfalls or gaps that an SOP can have.
3. To encourage teamwork through proper delegation of tasks.
4. To underline the need for developing SOPs for Hospital Safety that are specific to their hospital and the disasters they are vulnerable to.

Method

The participants can be divided in two teams of six. Remaining participants can act as adjudicators, observing the two teams and evaluating how they deal with the situation presented to them. The two teams, namely Team A and Team B, shall be handed out SOP A and SOP B respectively. Both teams should be given five minutes to familiarize themselves with SOP.

Team B should be excused from the room while Team A executes the task. On completion of the task, Team B should be called for their turn while Team A waits. At the end of the same, the adjudicators should present their evaluation which should broadly encompass what all went right and wrong with either team.

Task

In the early hours of 23rd February, 2021, a fire broke out in the adjacent commercial complex of SN Hospital. The fire suddenly rages on and spreads to the canteen of the hospital which shares a boundary with the complex. At 5 AM, a staff who has just arrived for duty notices the fire and rushes to inform the doctor. Since the canteen was built later as an add-on building, the fire does not trigger the fire alarm and sprinkler system in the building.

Trainer's Guide

- Some participants should be made patients who need evacuation. Their treatment status should be different i.e., ambulatory, mobile with wheelchair, tethered to ventilator, dialysis machine, etc.
- If there are two exits in the room, block exit 1 without informing the participants. SOP B will mention this.
- Two wheeled chairs can be used as wheelchairs. However, they should be placed at a location that has been mentioned only in Team B's SOP.
- Place a fire extinguisher outside the classroom. Only team B's SOP states the location.

- One student can act as the Fire Department and two as a hospital where patients can be shifted. Only team B's SOP states the need to have a Public Information Officer to coordinate with the agency.
- Light switches can be used to signify heavy machinery that needs to be turned off in case of emergencies.

Fire Emergency SOP for Team A

1. Ensure proper division of various responsibilities.
2. Make contact with the Fire Department and update them with the situation.
3. Identify exit points from the hospital.
4. Exit using the nearest fire exit door.
5. Use fire extinguishers.
6. Early discharge or transfer of patients to long-term care facilities, assisted living facilities or other hospitals may be considered by the doctors as conditions warrant.
7. Begin evacuation of the patients in an orderly fashion. Use wheelchairs where necessary.
8. Ensure ambulances are ready to take patients to other hospitals.
9. Switch off all important equipment that might cause further damage.

Fire Emergency SOP for Team B

1. Assign the following roles
    a. Incident Commander (IC) - To ensure proper commitment to the SOP
    b. Public Information Officer (PIO) - To liaison with external agencies and parties
    c. Safety Officer (SO) - To locate and employ safety tools and measures
    d. Operations & Logistics Officer (OLO) - To identify personnel and patients and deploy a plan for evacuation.
2. PIO to make contact with the Fire Department (Input number of volunteer student) and provide an update on the situation.
3. SO to bring the Fire Extinguisher to the scene of the incident from (Input location).
4. SO to identify Exit 2 and inform the group that it is the designated Fire Exit.
5. OLO to identify patients and visitors and evacuate them in the following order -
    a. GREEN: Those able to walk: Accompanied out in groups by nursing assistants, ward clerks, or other non-professional personnel. Infants will be carried by their parent.
    b. YELLOW: Wheelchair-dependent patients: Accompanied out by nursing assistants, or ancillary services personnel (x-ray, lab, RT, PT, OR, etc) Use wheelchairs located at (Input location).

c. RED: Bed bound patients: Accompanied out by nursing assistants or ancillary service personnel. Use beds, gurneys, or backboards. Any patient requiring close monitoring (ICU, Labor, Postoperative, ER) will be accompanied by licensed personnel.

6. PIO to make contact with other hospitals, (Input number of volunteer students) and make enquiries about availability of beds in order to shift patients. Forward the information to the IC.

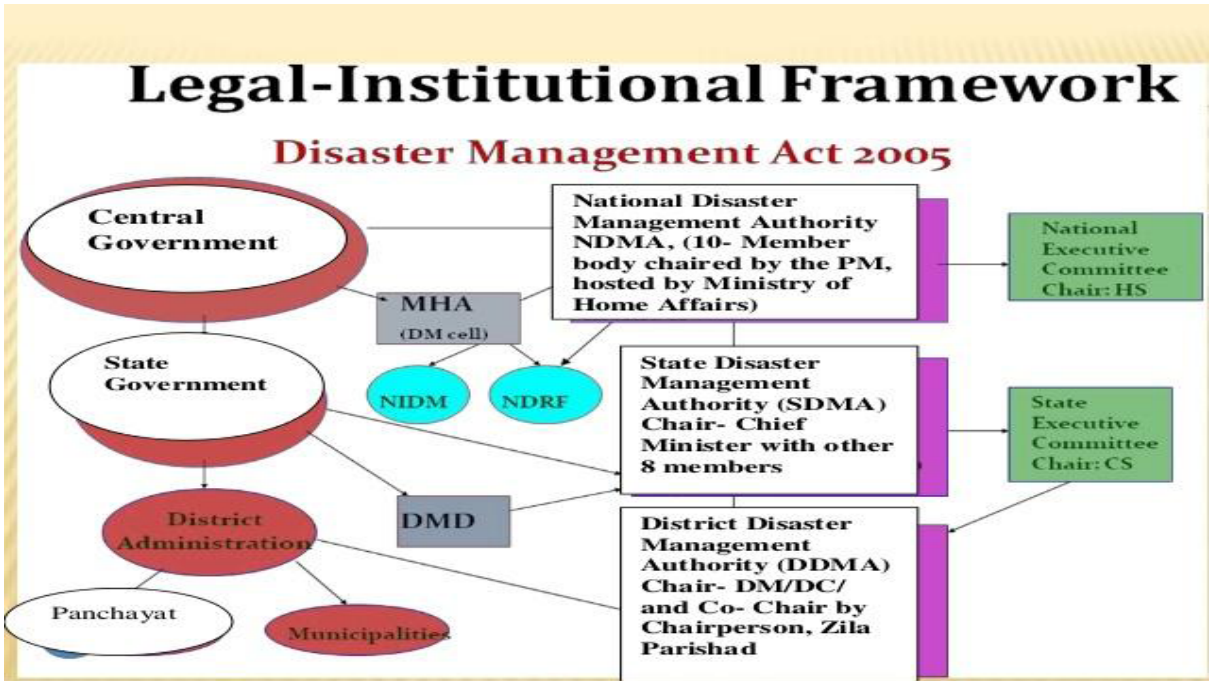
7. IC to identify a location outside the hospital as a temporary shelter area. Share location with the rest of the team. OLO to ensure all evacuees arrive at the location.

8. IC to make a list of all patients and identify the patients that need to be shifted to other hospitals in coordination with the OLO.

9. SO to ensure all electronic equipment in the hospital building have been switched off at (Input switch location).

Annex 4: Institutional Framework for Disaster Management in India

(Mandated by the Disaster Management Act, 2005)



Source: Ahmad, Muzzafar. (2013). Disaster Management Initiatives: Policy Perspective and Effective Response Mechanism in India. Presentation made by member of NDMA at the 28th ALNAP meeting, Washington D.C, 4th March. Accessed on 03 October 2020 from https://www.slideshare.net/ALNAP/disaster-management-initiatives-in-india

Annex 5: Poorly Drafted Standard Operating Procedures on Disaster Management

XYZ Hospital

State ABC, INDIA

(Established by an act of _____, Estd: 1925)

POLICIES & STANDARD OPERATING PROCEDURES ON
DISASTER MANAGEMENT

AIM

1. To provide the Disaster Management Plan for XYZ hospital.
2. To develop a holistic strategy in coordination with other regional & National agencies with focus on prevention, preparedness & risk mitigation, in order to reduce the impact of disasters both within the hospital and in the region.

POLICY:

A. Committee

A XYZ Hospital Disaster Management Committee (SDMC) will be constituted under the Chairmanship of Director- XYZ Hospital with a broad membership of all stakeholders. This Committee composition may be modified from time to time.

XYZ Hospital Disaster Management Committee

S.No	Name & Designation	Department	Contact No.

B. Objectives of the Committee:

1. To take adequate measures and adopt necessary best practices to ensure that the hospital is prepared to manage any natural as well as manmade disaster.
2. To update the Disaster Management Policy periodically

C. Broad Policy Outline.

This document will outline protocols to be followed for further development of department/ area specific SOP's training programmes. Mock drills are to be implemented after the initial round of education & training. This activity should be done once in every quarter.

III. DISASTER DESCRIPTION

- Definition of Disaster and Types of Disasters:
- Disaster Classification
- Disaster Management Cycle.

Disaster Risk Reduction within the hospital

Biological: Hospital will be safeguarded against any outbreaks of communicable diseases

Ownership –

Accidents: Buildings and surroundings should be inspected monthly with documentation of soundness regarding civil, Mechanical & Electrical components to prevent fire, collapse, water logging, drainage disruption etc.

Ownership-

Technological: Areas prone for hazards relating to radiation, chemical spills and sewage shall be monitored and proper educational processes or radiation hazard and chemical spill instituted.

Ownership –

Disaster Risk Information Improvement and creating safety culture:

Improvement in structural & non-structural elements will be undertaken to increase safety. Physical infrastructure (drainage channels etc) will be reviewed and rectified as required. Increased efforts will be made towards knowledge development /dissemination, awareness campaigns, and curriculum development.

Ownership –

Integrated Planning with regional and national disaster management agencies:

Meetings, at least once in 6 months, should be held with state / national agencies, so as to ensure smooth operation in case of disaster.

Ownership –

FUNDAMENTAL PRINCIPLES OF DISASTER MANAGEMENT:

Do the greatest good to the largest possible number of affected people within the optimal time frame using the maximal resources deployable. For this, all the staff of the hospital should be aware of the hospital disaster management plan.

Disaster Rapid Response Teams:

When Emergency operations are required, the central command will activate Disaster (Disaster Action). The Disaster Rapid Response Teams shall comprise the following area-specific sub-teams.

A. Main hospital

S.No	Name	Department	Contact No.

B. Casualty/EMS

S.No	Name	Department	Contact No.

C. R I C U

S.No	Name	Department	Contact No.

D. Medical ward adjacent to Casualty

S.No	Name	Designation	Mobile No.

E. Communications Team-Administration Building and Lobby:

S.No	Name	Designation	Mobile No.

F. Security Team-Administration Building and Lobby:

S.No	Name	Designation	Mobile No.

G. Transport/Vehicles Team-Transport Room:

S.No	Name	Designation	Mobile No.

H. Fire Safety Team:

S.No	Name	Designation	Mobile No.

Disaster Management Steps: When any Disaster Action is enforced, an emergency control room should be activated. All Disaster Rapid Response teams should position themselves in the designated areas. The workforce designated to the respective areas should be called in by the Rapid Response teams.

Responsibility of Control Room Medical officer

1. He is the Head of the Disaster Management team and should act effectively during crisis. He will be assisted by a General Administration Officer, Medical Administration Officer and other voluntary members.

Responsibility of General Administration Officer

1. He will work under the instruction of Control Room Medical officer.
2. He should have drawn advance cash from Account office.
3. He should decentralize the vehicles at the required place
4. He should control the sanitation and security related work

Responsibility of the Medical Officer

1. He will work under the instruction of the Hospital Command Centre /Control Room Medical Officer and take care of the entire hospital.
2. He should organize additional medical staff for emergencies.

Responsibility of General Section

The vehicles under the control of the General Manager should be made available with drivers

Responsibility of Estate Manager

The Estate Manager with his team should be present at the Hospital Command Centre/ Control Room, to assist the General Manager.

Voluntary members from Staff & Students

This is very important manpower in crisis management.

Annex 6: Case Scenario on Psychological Safety

Learning Objectives: At the end of this activity, you will be able to:

- Understand how poor leadership and low psychological safety can lead to low staff morale in hospital/healthcare setting.
- Realize how low psychological safety can lead to hospital and patient harm.
- Illustrate why it can be difficult to speak up when someone in a position of power displays unsafe behavior.

Description: The behavior of a senior doctors starts to put your hospital safety at risk. How will you react?

I was a nurse in a 50-bedded hospital in the state of West Bengal. I had been working there for the last 5 years. Our previous nurse-in-charge (nursing supervisor) was very approachable, and all the nurses and other frontline workers had a good bond with the team. The new nurse-in-charge, who joined 6 months ago, was a contrast. She was very strict and unfriendly with her juniors. She was good at pointing out faults of juniors and the system and made us feel small and worthless and did nothing to share or understand our problems, both-personal and work related. However, she maintained good relations with the doctors and Department head. One day, when I was on duty in the Operation Theatre, I went to open a cupboard to take out a medical equipment and suddenly I noticed a strong odor of formalin. How did it get there? I quickly closed the door and opened it once more to recheck. The same smell again! I also felt a burning sensation in my eye and felt difficulty in breathing. I gathered some courage to go to the nurse-in-charge and inform her about the incident and ask her to take the required action for the spill containment and cleaning-up by a specially trained team. As usual, she looked at me angrily and asked if I wanted to teach her about her responsibilities? Then she just walked off from there asking me to prepare for the operation that was due to take place in 15 minutes. I was left thinking about what to do.

Discussion Questions:

1. If you were in the nurse's place, what would you do? Is there anyone you would go to, to report about your superior for providing unsafe care? Who would that be?
2. How does you senior's behavior impact your ability to feel safe when reporting an unsafe act?
3. As a nurse, would you report about a doctor's unsafe behavior or practices? Vice versa?
4. Can you think of any situation when you stayed quiet or would stay quiet, when you saw a superior providing unsafe care?
5. Have you had any personal experiences with bad leadership that you'd like to share?

Annex 7: Case Studies on Hospital Fires

LACK OF FIRE SAFETY MEASURES IS A TREND THAT CONTINUES UNABATED IN HOSPITALS

The month of August 2020 has witnessed 2 fires in Covid-19 designated hospitals of India. The recent incidents took place in Vijayawada and Ahmedabad and point to the lack of fire safety measures. While rules for fire safety are very well laid down by the Bureau of Indian Standards, are hospital stakeholders even aware of the rules? How are these rules flouted, and how will this trend be curtailed? These are some questions that need reflection as well as action. A brief about the 2 cases is discussed below:

THE CASE OF SHREY HOSPITAL AHMEDABAD

India woke up to the death of 8 patients of Covid-19 who were admitted in the ICU ward of Shrey Hospital, Ahmedabad early on Thursday, 6th of August 2020. The cause of death was suffocation caused by fire in the ICU ward which was on the 4th floor of the building. There were 49 patients in the 50-bed Shrey Hospital at the time, eight of them in the ICU. Shrey Hospital is a 22-year-old hospital. It was designated a coronavirus facility on May 16, 2020.[1]

The hospital had no fire clearance, Ahmedabad Fire and Emergency Services Chief Fire Officer M F Dastur said. This is despite the fact that hospitals are required to renew their fire no objection certificates (NOC) every year[2]. Interestingly, Shrey Hospital was largely permitted for residential use before it started operations as a health facility in 1999 and illegal constructions were also made which were regulated only in 2016.[3] The fire, reported around 3.30 am on Thursday, is suspected to have started due to a short-circuit in the ICU, spreading from there to the third floor. The eight patients thus died of suffocation before the firemen could make it to the fourth floor, that was the topmost.

An FIR against the owner and some unknown persons was registered on the 10th of August for causing negligence which caused the fatalities. The owner/trustee and the administrator were then arrested on 12th of August, almost a week after the mishap.[4] The DCP zone 1- shared "We have found that the hospital was being run without fire NOC, no proper arrangements were done to deal with the fire and their staff was not trained to deal with the fire tragedy."[5]

THE CASE OF RAMESH HOSPITAL, VIJAYAWADA.

At least 10 Covid patients were asphyxiated when a makeshift Covid- 19 hospital in Vijayawada caught fire on Sunday, 9th of August; merely 3 days after the Ahmedabad Covid-19 hospital fire tragedy. More than 20 other patients and 6 medical personnel

1 indianexpress.com/article/cities/ahmedabad/gujarat-ahmedabad-shrey-hospital-fire-vijay-rupani-6541676/
2 indianexpress.com/article/cities/ahmedabad/gujarat-ahmedabad-shrey-hospital-fire-vijay-rupani-6541676/
3 https://indianexpress.com/article/cities/ahmedabad/shrey-hospitals-illegal-constructions-were-regulated-in-2016-6546405/
4 https://indianexpress.com/article/india/week-after-8-covid-patients-died-in-gujarat-hospital-fire-administrator-held-6552314/
5 https://timesofindia.indiatimes.com/city/ahmedabad/shrey-hospital-fire-tragedy-fir-against-bharat-mahant/articleshow/77479836.cms

were present in the hotel-turned Covid-care facility and around 18 have sustained injuries.[6] A short circuit in the building's air-conditioning unit flared into a blaze and caused this mishap. Ramesh Hospital, which had rented the Swarna Palace hotel as a make shift facility, has been blamed for failing to check if the temporary facility adhered to fire safety norms. Apparently, safety concerns were given a miss apparently in the scramble for standby arrangements, after Andhra Pradesh's COVID caseload began to increase.[7] While investigating the accident, the incident commander and Tahsildar of Vijayawada Central unearthed some major lapses from the hospital management's end. He quoted, 'It appears that Hotel Swarna Palace and Ramesh Hospitals had knowledge of that there were electrical defects in the lodge, and as rectification of defects involved huge amounts, avoided the repairs.[8]

Three officials of Ramesh Hospital including the COO have been arrested in connection with Vijayawada fire accident.[9] The owner of both, the hospital and hotel, are missing since the news of the fire at Swarna Palace broke.[10]

The Indian Medical Association Andhra Pradesh chapter has written to Director General of Police (DGP) requesting him not to incriminate and initiate action against the service providers (Ramesh Hospitals) and its employees at a time when doctors are offering their services amid a crisis. The IMA pointed out that the Health Department had given permission to run the Covid Care Centre![11]

Where lies the problem and who is accountable?

India accounts for nearly a fifth of the serious fire accidents in the world according to the Global Disease Burden Study 2017.[12]

The National Building Code of India published by the Bureau of Indian Standards (BIS) is the recommended document for all buildings across the country. The chapter on 'Fire and Life Safety' is instrumental in the way the exits and staircases are laid out and electrical circuits and water tanks are mapped in order to minimise fire related accidents. Further, every building has to get a fire safety audit done every year, where a fire officer comes to check on all the parameters and codes. Despite all these guidelines, the implementation mechanisms are weak.

While the responsibility for maintenance and upkeep of the building rests with the management, the contractors should also be held accountable for maintenance.

6 https://www.newindianexpress.com/states/andhra-pradesh/2020/aug/12/eight-special-teams-hunt-for-md-of-ramesh-hospitals-in-connection-with-fire-that-killed-10-covid-19-patients-2182346.html
7 https://indianexpress.com/article/opinion/editorials/vijayawada-fire-covid-care-center-and-pandemic-ramesh-hospital-6549274/
8 https://www.timesnownews.com/india/article/andhra-pradesh-three-arrested-in-connection-with-vijayawada-fire-accident-which-claimed-10-lives/634961
9 https://indianexpress.com/article/opinion/editorials/vijayawada-fire-covid-care-center-and-pandemic-ramesh-hospital-6549274/
10 https://www.newindianexpress.com/states/andhra-pradesh/2020/aug/12/eight-special-teams-hunt-for-md-of-ramesh-hospitals-in-connection-with-fire-that-killed-10-covid-19-patients-2182346.html
11 newindianexpress.com/states/andhra-pradesh/2020/aug/12/eight-special-teams-hunt-for-md-of-ramesh-hospitals-in-connection-with-fire-that-killed-10-covid-19-patients-2182346.html
12 https://indianexpress.com/article/opinion/editorials/vijayawada-fire-covid-care-center-and-pandemic-ramesh-hospital-6549274/

Municipal bodies that give the final clearance should be held accountable for giving the NOC for any building. The architect/builder must also be questioned on the safety and validity of the building plan.[13]

13 https://indianexpress.com/article/explained/vijayawada-ahmedabad-covid-19-hospital-fires-rules-6550865/

Annex 8: Case Study on Hospital Error

Learning Objectives:

At the end of this activity, you will be able to:

1. Understand the concept of compliance, monitoring and evaluation along with their operational context.
2. Identify which activity should be planned at what stage.
3. Realize the importance of these processes in ensuring a smooth work-flow process during and after the disaster.

Disaster Preparedness of Ambulatory Facilities at KNP Hospital, Madurai

The KMC Hospital is intertwined with the history of Madurai having existed since 1875. It started off as the offshoot of the KNP Medical college and steadily grew to an independently-governed 1500 beds hospital. The Hospital and the Medical College coexist in a symbiotic relationship pushing each other to grow and flourish.

The CEO of KMC Hospital, R. Srinivas is a thorough man who understands the importance of Disaster Management and its consequences. The Disaster Management Committee, established on his insistence, actively organises mock drills, which are thoroughly observed and analysed. This leads to identifying faults in the SOPs and points of weaknesses that can cause the loss of life during disasters.

In one such drill some gaps became apparent. The drill was emulating a fire scenario in a building five kilometers from the hospital. As per the plan chalked out by the DM Committee, everyone got to work. The ambulances rushed to the site of the disaster. At the site, they were supposed to work in tandem with the fire department and tend to all the rescued people. Observe and report the level of severity of the injury and either administer first aid or rush them to the hospital in a serious case.

The drill started revealing gaps from the get-go. The staffers of the ambulances, realize that the wheelchairs in the ambulances were missing. The wheelchairs used for ferrying earlier patients were never returned and therefore lay scattered across the hospital campus. They scrambled to secure them but that took time. Time that could have saved lives.

The delay caused by wheelchairs was only made worse by another gap. On arrival, several patients who would have been subjected to thick carbon monoxide fumes would need to be administered oxygen to breathe. However, the oxygen cylinders in the ambulances were empty. The hospital had not allocated the responsibility of replenishing oxygen cylinders or even keeping a check on them to any employee. In a real disaster this could be detrimental to saving lives.

The final nail in the coffin came in the form of expired Adrenaline. Adrenaline can be a very useful drug as a last resort to save lives. It helps breathing, stimulates the heart

and can even raise a plummeting blood pressure. The ambulances had Adrenaline shots that were past their expiry date rendering them useless. The staffers had been ensuring that the ambulances are stocked but hadn't been keeping the expiry dates of the drugs in check.

This drill highlighted multiple facets of errors that could be the question of life and death in such rescue operations. The management of the hospital was now in a place to take informed decisions on how to fill the gaps in their operations.

Discussion Questions:

Assume that you have been appointed as a member of the disaster management committee by the head of your hospital. Now, try to figure out the responses to the questions elucidated below.

1. What do you think was the reason behind the fiasco during the mock drill?
2. Could this fiasco been avoided, given that the team had to rush to an unknown location which is on fire and the team is not well acquainted with the place?
3. Which among the three processes of compliance, monitoring and evaluation would have been helpful and in which part?
4. For each of the three processes mention whether it should have been carried out by the internal staff of the hospital or external or a mix of both?
5. What are the challenges that you would face while carrying out each of these processes and how you will overcome it?

Annex 9: Exercise on Importance of Mock Drills

Learning Objectives

1. To ensure participants are aware of the necessity of mock drills for Hospital Safety and Disaster Management.
2. To enlighten participants about how unforeseen challenges can be on-ground while practicing.
3. To underline the need for doing regular mock drills to make sure all the staff and employees are aware and habitual of their roles and responsibilities in case of any circumstances they might be vulnerable to.

Method

The participants can be divided in two teams of six. Remaining participants can act as adjudicators, observing the two teams and evaluating how they deal with the situation presented to them. The two teams, namely Team A and Team B, shall be handed out the same SOP. Both teams should be given five minutes to familiarize themselves with SOP.

Team B will be excused from the room while Team A executes the task. On completion of the task, Team B should be called for their turn. Lastly Team A will execute the same task again while Team B watches, The idea behind this is that through practice and observation, team A should be able to perform better the second time and execute the evacuation more efficiently. During de-briefing session, the class can discuss the difference of performance of both teams.

Task

In the late evening of 6th March, 2021, a toxic gas, chlorine, leaked in the maintenance room on the terrace of JP Hospital. A super specialty cardiac hospital, it is a 5 storey building that housed over fifty patients on that day. Exposure to these toxic fumes causes respiratory ailments and immediate treatment is required. The staff on duty realized the smell is something out of the ordinary as patients begin to complain of breathing issues. The gas quickly pervades through the area and makes its way across the building through the central air conditioning unit. A Senior Medical Officer is alerted.

Trainer's Guide

- Some participants should be made patients who need evacuation. Their treatment status should be different i.e., ambulatory, mobile with wheelchair, tethered to ventilator, dialysis machine, etc.
- If there are two exits in the room, block Exit 1 without informing the participants. Inform them when they try to use it during the exercise.
- Two wheeled chairs can be used as wheelchairs. One of them is not operable. Inform them when they try to use it during the exercise.

- Light switches can be used to signify heavy machinery that need to be turned off in case of emergencies.
- Oxygen tanks are empty. Inform participants if they wish to access them.

Chemical leak Emergency SOP for Teams

1. Assign the following roles
    a. Incident Commander (IC) - To ensure proper commitment to the SOP
    b. Public Information Officer (PIO) - To liaison with external agencies and parties
    c. Safety Officer (SO) - To locate and employ safety tools and measures
    d. Operations & Logistics Officer (OLO) - To identify personnel and patients and deploy a plan for evacuation.
2. PIO to make contact with the Fire Department (Input number of volunteer student) and provide an update on the situation.
3. IC to identify a location outside the hospital as a temporary shelter area. Share location with the rest of the team. OLO to ensure all evacuees arrive at the location.
4. IC to make a list of all patients and identify the patients that need to be shifted to other hospitals in coordination with the OLO.
5. SO to bring Oxygen Tanks to aid patients struggling.
6. SO to identify Exits.
7. OLO to identify patients and visitors and evacuate them in the following order -
    a. **GREEN**: Those able to walk: Accompanied out in groups by nursing assistants, ward clerks, or other non-professional personnel. Infants will be carried by their parents.
    b. **YELLOW**: Wheelchair-dependent patients: Accompanied out by nursing assistants, or ancillary services personnel (x-ray, lab, RT, PT, OR, etc). Use wheelchairs located at (Input location).
    c. **RED**: Bed bound patients: Accompanied out by nursing assistants or ancillary service personnel. Use beds, gurneys, or backboards. Any patient requiring close monitoring (ICU, Labor, Postoperative, ER) will be accompanied by licensed personnel.
8. PIO to make contact with other hospitals, (Input number of volunteer students) and make enquiries about availability of beds in order to shift patients. Forward the information to the IC.
9. SO to ensure all electronic equipment in the hospital building have been switched off at (Input switch location).