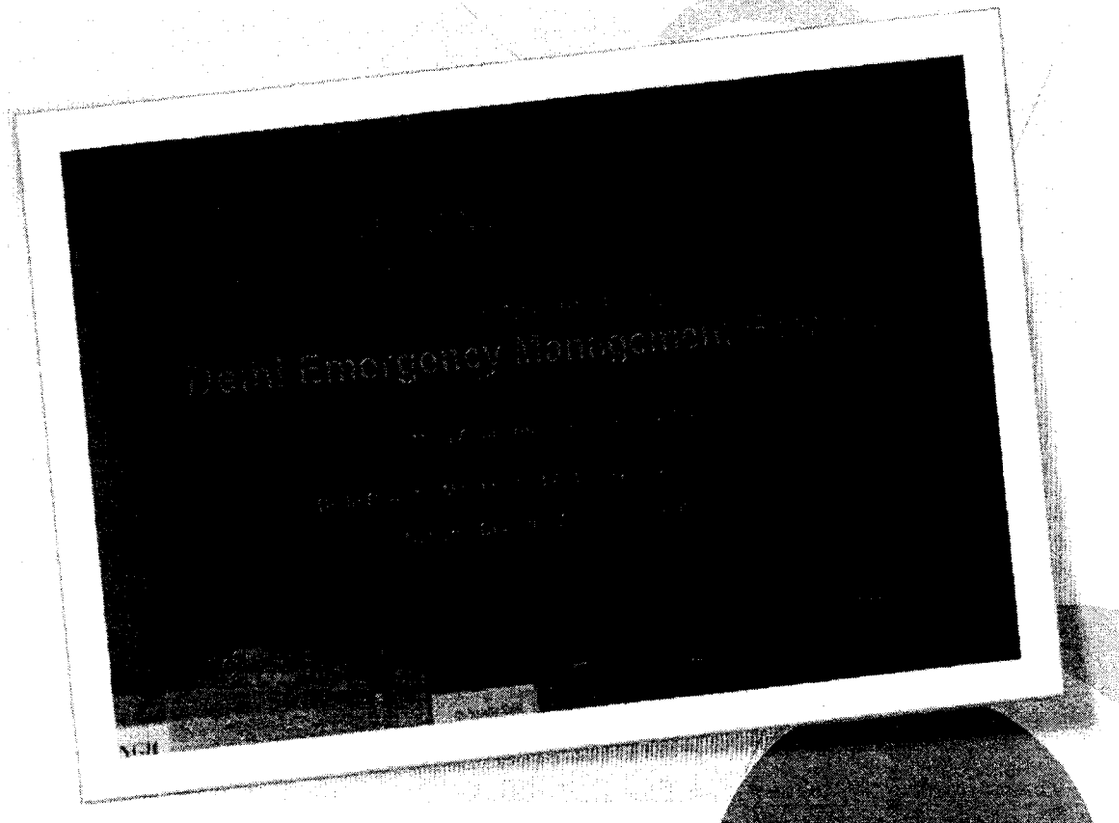
REPORT ON

TWO DAYS WORKSHOP ON HOSPITAL SAFETY, MASS CASUALTY MANAGEMENT & HOSPITAL DM PLANNING



Delhi Disaster Management Authority
O /o The Divisional Commissioner
5-Shamnath Marg, Delhi-110054

REPORT ON "TWO DAYS WORKSHOP ON HOSPITAL SAFETY, MASS CASUALTY MANAGEMENT AND HOSPITAL DM PLANNING"

Disaster have occurred ever since the existence of mankind & no community is immune to emergencies caused by natural & man made phenomena. Disaster events result in a number of deaths & injuries in the community. It is also known fact that Medical Institutions / Hospitals would be among the first institutions to be affected after a disaster, natural or manmade. Disasters involve large number of casualties placing heavy continuing demands on health system. Thus hospitals need to be prepared to handle such an unusual workload.

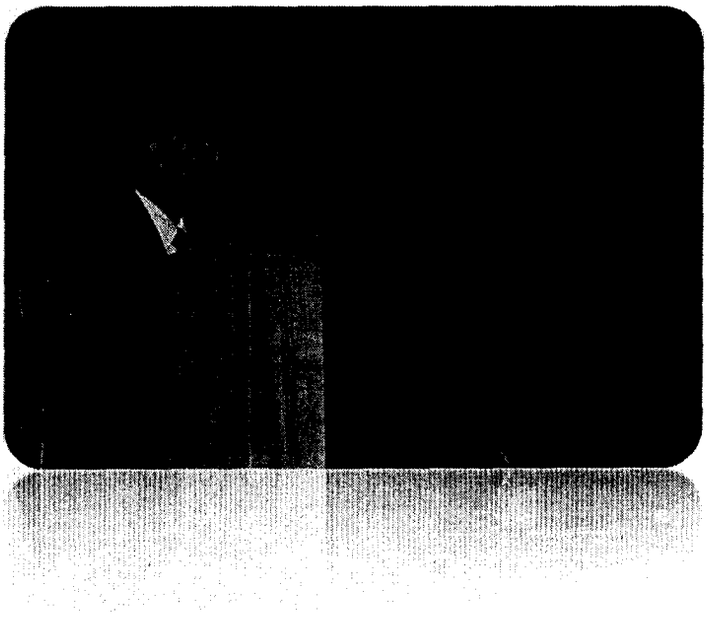
Keeping in view the above notion, Delhi Disaster Management Authority (DDMA) & National Disaster Management Authority (NDMA) organized a two days workshop on '**Hospital Safety, Mass Casualty Management and Hospital DM Planning**' with the objective to prepare Delhi state by emphasizing on the Medical Services / Emergency Medical Preparedness by organizing a Delhi Emergency Management Exercise (DEMEx) with the overarching goal that Health facilities are only truly safe from disasters when they are accessible & functioning at maximum capacity, immediately after a hazard strikes. The basic objective of organizing DEMEx is to prepare & activate the State's Hospital contingency plan.

Objective of the workshop: -

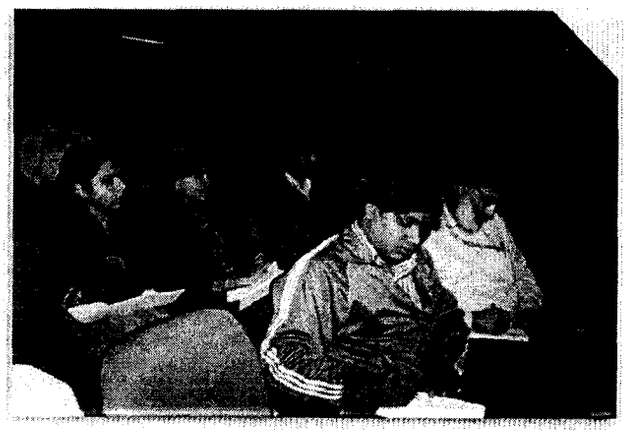
- **To develop a common understanding on the aspects of health sector preparedness for emergencies and hospital safety.**
- **To strengthen SOPs on emergency medical response and mass casualty management.**
- **To strengthen existing capacities for preparation and implementation of health and hospital DM plans.**
- **To understand the concept of disaster and its management.**
- **To enunciate the principles of disaster planning and the objectives and purpose of a disaster plan.**
- **To specify the composition, functions and responsibilities of the Disaster Committee.**
- **To outline the role and responsibilities of medical and nursing staff.**
- **To analyze the disaster facilities required.**
- **To develop a hospital disaster plan and modalities for response action.**

At the onset of the programme, floral welcome was accorded to all the dignitaries including Member, NDMA, **Dr. Muzaffar Ahmad, Sr. Specialist, NDMA, Ms. Naghma Firdaus & Sr. Consultant, NDMA, Dr. (Lt. Col.) Sameer Mehrotra** by District Project Officers viz. Ms. Surbhi Saxena (DPO-East), Ms. Neelofar Nizami (DPO-Central), Ms. Bindu Aggarwal (DPO-New Delhi).

Special Secretary (Revenue), Delhi Disaster Management Authority, Sh. Kuldeep Singh Gangar in his introductory speech welcomed all the participants & shared the concept of the ongoing major exercise i.e. DEMEx. He further shared that Disaster scenarios once seemed merely theoretical have become a disturbing reality.



Disasters in the communities come in all the shapes and sizes. Some impact a small number of people and put intense demands on the health system for a short period. Others may involve a large number of casualties but reach a plateau only after a latent period, placing heavy continuing demands on the health system. For some natural disasters like hurricanes, floods and volcanoes-hospitals are likely to receive advance warning and be able to activate their disaster plan before the event. For other natural disasters, such as earthquakes and tsunami, there is no advance warning, as of now. Many man-made disasters also provide no advance warning; these include chemical plant explosions, industrial accidents, building collapses and acts of terrorism. The emergence of state-sponsored terrorism, proliferation of chemical and biological agents, availability of materials and scientific weapons expertise all point toward a growing threat of a Mass Casualty Incident (MCI). Preparing for MCIs is a daunting task, as unique issues must be considered with each type of event. For example, the systemic stress of a bio-threat is entirely different from that of a chemical disaster. These differences hold challenging implications for the hospital preparedness and training. The hospital disaster preparedness has therefore taken on an increased importance at local, state and national levels.



He also emphasized on the objective & the various outcomes to be accomplished by working out the DEMEx Exercise.

The following programme Schedule was chalked in order to carry the said workshop:-

DAY '1' - 09TH NOVEMBER, 2012

Day and Time	Particulars/Topics	Resource Person
9.45 am -10.15 am	Registration & Pre-test	-
10.15 am – 11.00 am	Overview on Disaster management in India (with a focus on the health and hospital sector preparedness) and importance of Hospital safety and DM plans	Dr. Muzaffar Ahmad
11.00 am – 11.15 am	Tea break	-
11.15 am – 12.00 pm	Lessons Learnt in various disasters - AMRI fire incidence	-

	- Leh Cloudburst - Kashmir Earthquake - SANDY Supercyclone	
12.00 pm – 12.45pm	Hospital Evacuation Protocol – An essential ingredient of Preparedness	Dr. Manish Mehrotra
12.45pm – 01.30 pm	Hospital Disaster Management Planning	Dr. (Lt. Col.) Sameer Mehrotra
01.30 pm – 02.00 pm	Lunch Break	-
2.00 pm – 2.45 pm	HVA Exercise & DM Template	Dr. (Lt. Col.) Sameer Mehrotra
2.45 pm - 3.30 pm	Hospital Incident Command Structure	Dr. Anish Banerjee
3.30 pm – 4.15 pm	Hospital preparedness for CBRN Disasters	Maj. Gen (Dr.) J.K. Bansal
4.15 pm – 4.30 pm	Fire safety Protocols in Hospitals	-
4.30 pm - 5.15 pm	Crises Communication	Ms. Naghma Firdaus
5.15 pm – 6.00 pm	HICC Table top exercise	Dr. Anish Banerjee Dr. (Lt. Col.) Sameer Mehrotra

DAY '2' -10TH NOVEMBER, 2012

Day and Time	Particulars/Topics	Resource Person
10.00 am – 10.45 am	Hospital Emergency Operation Planning& Surge Handling	Dr. Tamorish Kole
10.45 am – 11.30 am	Safe Hospitals	Dr. (Lt. Col.) Sameer Mehrotra
11.30 am – 11.45 am	Tea	-
11.45 am - 12.15 pm	Pre Hospital Care & Triage	Dr. Amit Gupta
12.15 pm – 01.00 pm	Triage Exercise	Dr. Amit Gupta
01.00 pm – 01.30pm	Lunch break	-
01.30 pm – 02.15 pm	Public Health Emergencies	Dr. (Lt. Col.) Sameer Mehrotra
02.15 pm – 03.00 pm	Logistics Planning in disasters for Hospitals	Dr. Anish Banerjee
3.00 – 03.30 pm	Networking and coordination with stakeholders	Ms. Naghma Firdaus
03.30 pm – 03.45 pm	Tea	-
03.45 pm – 4.30 pm	Overview of EMEX	-

04.30 pm – 05.00 pm	**Post Test Evaluation**	-
5.00 pm - 06.00 pm	**Closing & Way Forward**	-

I. <u>Introduction of DEMEx</u>: by **Ms. Naghma Firdaus, Senior Specialist from National Disaster Management Authority (NDMA).**

This introductory session included an introduction of DEMEx preparatory workshop & need to emphasize on Hospital Safety, Mass Casualty Management & Hospital Disaster Management Plans in place. Ms. Naghma Firdaus emphasized on EMEx in context of Delhi, as Hospitals would be among the first institutions to be affected after a disaster, natural or manmade. Because of heavy demand placed on their services at the time of disaster, hospitals need to be prepared to handle such an unusual workload. Sr. Specialist from NDMA stressed on how to protect the lives of patients & health workers by ensuring the structural resilience of health facilities.

In her presentation she insisted on ensuring that health facilities & health services are able to function in the aftermath of emergencies & disasters and improving the risk reduction capacity of health workers & institutions including the holistic emergency management.

She discussed the outcomes of the DEMEx, which are majorly based on preparation & activation of Hospital Contingency Plan in line with the standard consideration as placed in the national guidelines on medical preparedness & mass casualty management issued by National Disaster Management Authority (NDMA), 2007.

II. **Disaster Management in India : Focus on Health & Hospital Preparedness** by **Dr. Muzzaffer Ahmad, Member NDMA.**

In the upcoming session of the programme, Dr. Muzzaffer Ahmad, Member NDMA gave a comprehensive overview on Disaster Management in India. He focused on the health & hospital sector preparedness & importance of Hospital Safety & Disaster Management Plans. Dr. Ahmad pointed out India's vulnerability to Disasters and highlighted few past major natural disasters including Kashmir Earthquake, Leh Cloud Burst, Super Cyclone Orissa, Earthquake at Chambal & Uttarakhand and manmade disasters viz. Jaipur Oil Depot fire, Bhopal Gas tragedy etc.

An overview on National Disaster Management structure, DM Act, 2005 & legal institutional framework was also given during the presentation. Dr. Ahmad further emphasized on Mass Casualty event and its impact on the normal & emergency care services and need to have the best "Hospital Management System". He also stressed on Community Based Disaster preparedness, as community stakeholders are the prime suspects as well as the first responders. A Holistic approach to Capacity Development must be a mandate to follow. He emphasized upon having a proper Hospital Disaster Management Planning and regular preparatory Drills & exercises.

The purpose of the hospital Disaster Drills is to train hospital staff to respond to Mass Casualty Incidents, to validate the readiness & effectiveness of the Hospitals

Disaster Management Plans. He emphasized that Hospital disaster drills should test various components viz. Incident Command & Response System, Communication, Triage, Patient Flow, Drugs & consumable stock, reporting security & other related issues.

III. Followed by the Indian Scenario, participants were enlightened by the real time experience / disaster of few recent major disasters on the globe which included:

- ✓ **<u>Super Storm Sandy</u>: by Ms. Ipsita Sircar, Mitigation Specialist from Geo Hazards Society.**
- ✓ **AMRI fire incident:** by **Dr. Anish Banerjee, Sr. Consultant, NDMA.**
- ✓ **Leh Cloudburst:** by Dr. (Lt. Col.) Sameer Mehrotra, Sr. Consultant, NDMA

IV. **Hospital Disaster Management Planning** by **Dr. (Lt. Col.) Sameer Mehrotra, Senior Consultant, NDMA.**

Followed by the discussion on lesson learnt exercises on past disaster experiences, Dr. (Lt. Col.) Sameer Mehrotra presented a brief on preparing a Hospital Disaster Management Plans & pro-active planning considering any misfortune / eventuality or disaster. The session was an interactive one in which various hospitals enthusiastic participated and discussed their Hospital Disaster Management Plan. The major hospitals participated during the discussion included:

- ✓ *Indian Spinal Injuries Centre (150 Bedded)*
- ✓ *Balaji Action Medical Institute (300 Bedded)*

- ✓ *Lal Bahadur Shastri Hospital (100 Bedded)*
- ✓ *Lok Nayak Hospital*
- ✓ *Guru Gobind Hospital (100 Bedded)*
- ✓ *Sita Ram Hospital (50 Bedded)*
- ✓ *St. Stephen's Hospital (500 Bedded)*

During the discussion, requests were placed by various hospitals for enhancing the level of coordination & communication as well as connectivity among various medical institutions.

Dr. Mahotra emphasized that the hospitals need special planning for both, mass accident as well as damage area management . This means that every hospital, regardless of its size, requires a practicable and well trained plan for such cases. This does not only include the enhancement and coordination of the medical performance, but it is also an important additional tasks which should be added to the daily practice. That is why a plan for the organization at a major accident exceeds the simple task of only alarming additional forces. He further stressed on Basic requirements of preparing and following an effective Disaster Management Plan

The hospital's community service role begins long before the disaster as the hospital develops tests and implements its disaster plan. The objective is to prepare the hospital through the development of emergency response systems, staff training and purchase of equipment and materials so that it can continue caring for its present patients, protect its own staff and respond to the needs presented by the disaster. In addition to having a well documented DMP in place, it is prudent to have regular drills to test the hospital's DMP.

Finally, hospital preparedness can be enhanced more rapidly if standardized state and national guidelines for model hospital DMP, staff training, disaster drills and accreditation of hospitals based on DMP are developed and widely disseminated.

The resource person also shared with the audience that NDMA had designed a specific Hospital Disaster Management Plan Template covering all the vital information regarding every aspects of Hospitals. A copy of the same was also distributed among the participants.

V. **Hospital Incident Command Structure** by **Dr. Manish Mehrotra**, Senior Consultant, NDMA.

During this session of Hospital Incident Command Structure, Dr. Manish emphasized on Hospital Incident Command Structure being the basis of Hospital Disaster Management Plan. During the presentation, Dr. Manish gave an overview on Hospital Incident Command Structure & stressed on having a uniform hierarchal structure which will lead to preparation of better disaster management plans. During his presentation he discussed the elements and advantages of an effective HICS.

VI. **Hospital preparedness for CBRN Disasters** by **Maj. Gen. (Dr.) J.K. Bansal**, Member NDMA.

During this session on "Hospital Preparedness on CBRN" the member NDMA introduced various aspects pertaining to CBRN issue for Medical Preparedness.

He discussed various CBRN scenarios which may prove fatal to the mankind. During the presentation long term Health effects viz. concern Cancers Lungs: interstitial fibrosis & parenchymal atrophy, premature aging & cataract, Contracture & keloids due to burns, Chromosomal aberration, chronic radio dermatitis, Genetic, Infertility, Damage to embryo were also discussed.

He emphasized on NBC casualties management & importance of decontamination & training of the paramedics.

It was stressed for a continuous threat posed by CBRN agents by Terrorist against the country, in addition to risk of accidents in Nuclear / Chemical plants, thus it is important for Hospital / Medical institution to be fully prepared in order to handle casualties arising out of such an eventuality.

Further, such type of incident shall lead to enormous casualties, therefore a proper planning, pooling of resources, coordination between various agencies, training & regular exercises are to be planned & prepared at massive scale to handle CBRN casualties.

VII. **Pre-Hospital Trauma Care- An Overview** by **Subodh KumarAssociate Professor, Surgery, JPN Apex Trauma Centre,** All India Institute of Medical Sciences, New Delhi

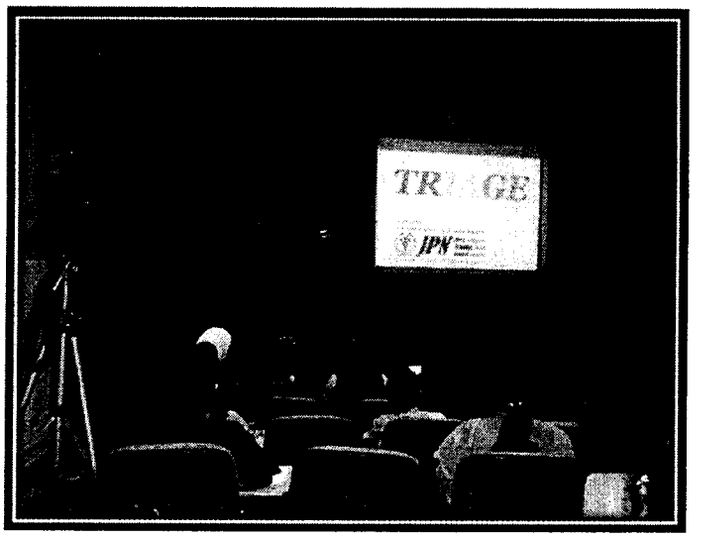
Dr. Subhodh emphasized on protocols to be followed in initial Trauma Management. Every management requires organization and leadership. Especially in times of a crisis an additional need of immediate action arises and decisions have to be taken in a straight forward way.

The Resource person stressed upon communication as one of the main problems in case of major accidents and disasters. Information has to be reduced to the most important facts. Wire and radio contacts as well as messengers have to be integrated into the communication concept. It also has to be taken into account that any systems may fail. Cellular phones often fail in such situations due to overcharge. Appropriate marking of the staff in charge is also an important part of communication.

While responding to a mass casualty event, the goal of the health and medical response is to save as many lives as possible. Rather than doing everything possible to save every life, it will be necessary to allocate limited resources in a modified manner to save as many lives as possible. Dr. Subodh emphasized on need of primary & secondary survey.

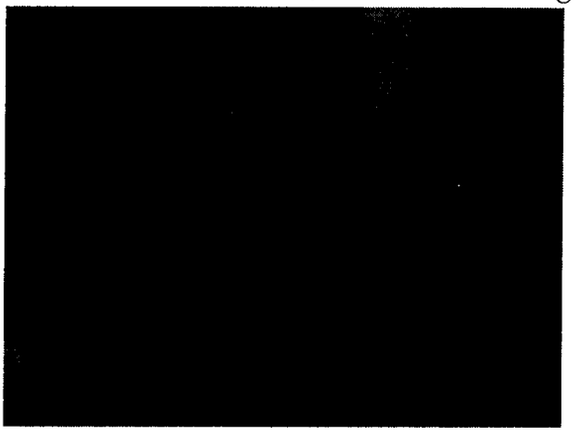
VIII. **Triage** by **Dr. Amit Gupta, Associate Professor of Trauma Surgery**, JPN Apex Trauma Center, All India Institute of Medical Science.

Dr. Gupta explained the meaning of Triage as the process of determining the priority of patients' treatments based on the severity of their condition. This rations patient treatment efficiently when resources are insufficient for all to be treated immediately.



He further added that Triage may also be used for patients arriving at the emergency department, or to telephone medical advice systems, among others.

When disaster strikes, effective management of resources can significantly influence the overall outcome of the response. If the number of victims and the complexity of their injuries are low and resources are abundant, resource allocation will have little impact on the disaster outcome.



However, if there is a high number of victims with complex injuries and available resources are limited, how those resources are used will determine the outcome for some individuals.

Dr. Gupta emphasized on that while responding to a mass casualty event, the goal of the health and medical response is to save as many lives as possible. Rather than doing everything possible to save every life, it will be necessary to allocate limited resources in a modified manner to save as many lives as possible. When a hospital responds to a large number of victims presenting over a short time, often without a prior warning, delivering care to the level of usual hospital standards or

benchmarks may not be possible and "altered standards" may have to be acceptable. The term "altered standards" has not been defined, but generally is assumed to mean a shift to providing care and allocating scarce equipment, supplies and personnel in a way that saves the largest number of lives in contrast to the traditional focus on saving individuals. For example, it could mean applying principles of field triage to determine who gets what kind of care. It could mean changing infection control standards to permit group isolation rather than single person isolation units. It could mean limiting the use of ventilators to surgical situations. It could mean creating alternate care sites in the waiting area, lobby or corridors which are not designed to provide medical care; minor surgical procedures in victims in these areas could mean altered level of asepsis. It could also mean changing who provides various kinds of care like enhancing the scope of nurses, physician assistants and hospital paramedics. Secondary triage also may be necessary within hospital, as demands on the system grow. Hospital DMP should consider the possibility that a hospital might need to evacuate partially or wholly, quarantine, or divert incoming patients. For example in the event of flooding, the ground floor services may need shifting to higher floors or a make shift operation theatre may be needed. Spare capacities for such contingencies should be included in the DMP.

At last, Dr. (Lt. Col.) Sameer Mehrotra thanked all the participants for their benign presence & for contributing their valuable inputs during the sessions. Dr. Mehrotra also requested all the participants to ensure their presence in the 2nd day of the workshop.

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