



Planning for **HEATWAVES** **Medical Aspects of Heatwave Management**

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**SAARC DISASTER MANAGEMENT CENTER
2018**

SESSION 1: SHARING EXPERIENCE ON NATIONAL PREPAREDNESS AND DEVELOPMENT OF HEATWAVE ACTION PLAN & GUIDELINE

- India's story in management of heat waves in past three year.
- What is more Important Mortality or Morbidity? with respect to heat waves.
- How Heat action plans are developed at National, State and City level.Few small case studies.
- Is heat wave a disaster ? how to act upon it to reduce the impacts of climate change on health, Why NDMA initiated this process and how far we have come, whats the way forward : sector specific planning and actions started to combat the upcoming season of heatwave.

SESSION 2 : MEDICAL PREPAREDNESS AND MANAGEMENT OF HEAT WAVE RELATED EMERGENCY

- Various symptoms associated with heatwave.
- Why Health sector has a role to play and what is the exact thing that we can do with regards to medical management of heatwave?
- Why it is difficult to classify a death as a heatwave related death.
- SOP for health sector.
- Roles and responsibilities of health sector
- Surveillance and reporting mechanism for heat illnesses.

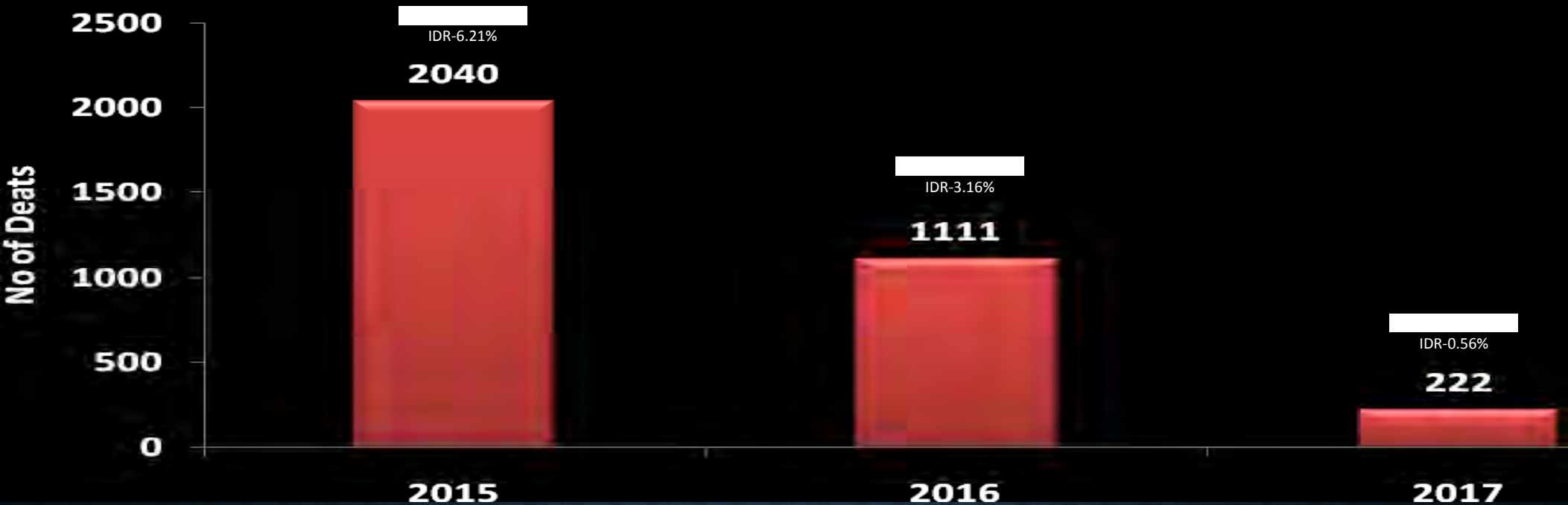


OUTLINE

- Heat illness
 - Risk factors
 - How the body handles heat
 - Types of heat illness
- Prevention of heat illness
 - Water consumption, shade, and cool-down rests
 - Importance of acclimatization
- Emergency response procedures
- Supervisory guidelines
- Time for Action

Heat Disorders		
Heat Disorder	Symptoms	First Aid
Heat rash	Skin redness and pain, possible swelling, blisters, fever, headaches.	Take a shower using soap to remove oils that may block pores preventing the body from cooling naturally. If blisters occur, apply dry, sterile dressings and seek medical attention.
Heat Cramps	Painful spasms usually in leg and abdominal muscles or extremities. Heavy sweating.	Move to cool or shaded place. Apply firm pressure on cramping muscles or gently massage to relieve spasm. Give sips of water. If nausea occurs, discontinue.
Heat Exhaustion	Heavy sweating, weakness, Skin cold, pale, headache and clammy extremities. Weak pulse. Normal temperature possible. Fainting, vomiting.	Get victim to lie down in a cool place. Loosen clothing. Apply cool, wet cloth. Fan or move victim to air-conditioned place. Give sips of water slowly and if nausea occurs, discontinue. If vomiting occurs, seek immediate medical attention, call 108 and 102 for ambulance.
Heat Stroke (Sun Stroke)	High body temperature. Hot, dry skin. Rapid, strong pulse. Possible unconsciousness or altered mental status. Victim will likely not sweat.	Heat stroke is a severe medical emergency. Call 108 and 102 for ambulance for emergency medical services or take the victim to a hospital immediately. Delay can be fatal. Move victim to a cooler environment. Try a cool bath or sponging to reduce body temperature. Use extreme caution. Remove clothing. Use fans and/or air conditioners. DO NOT GIVE FLUIDS ORALLY if the person is not conscious.

No of deaths due to Heat wave (1st April 2017 to 27th June 2017)



IDR = Heat related illness and deaths Ratio

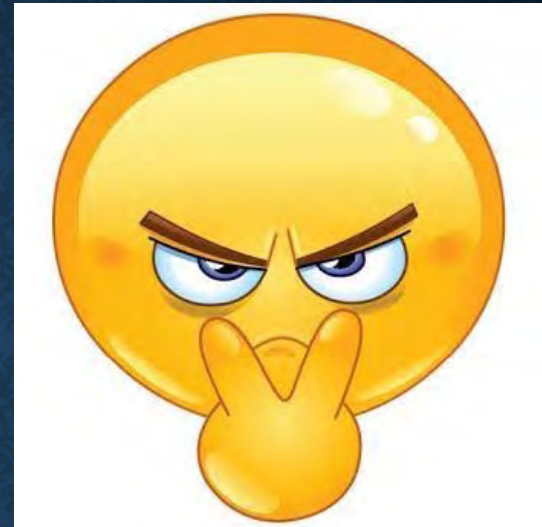
Source: Compilation of Revenue and DM Division of State Government,
IDSP-NCDC, Ministry of Health and Family Welfare

As per reported up to 31st July 2017

WHAT TO DO?

- **Recognize Heat Wave as a major Health Risk or PHEIC?**
- **Map out the 'High Risk' Communities**
- **Set up of 'Public Cooling Places'**
- **Use different media to convey heat wave alerts**

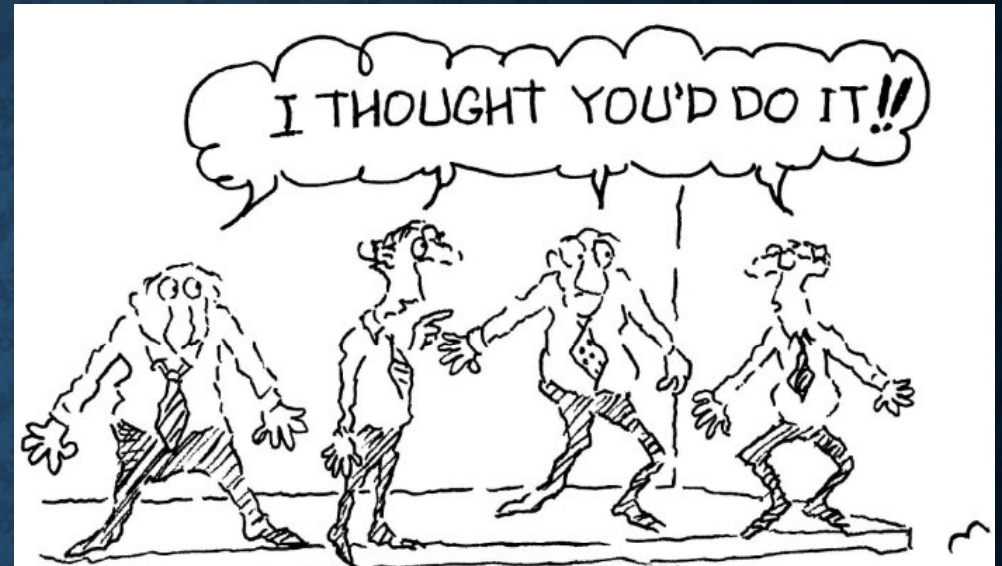


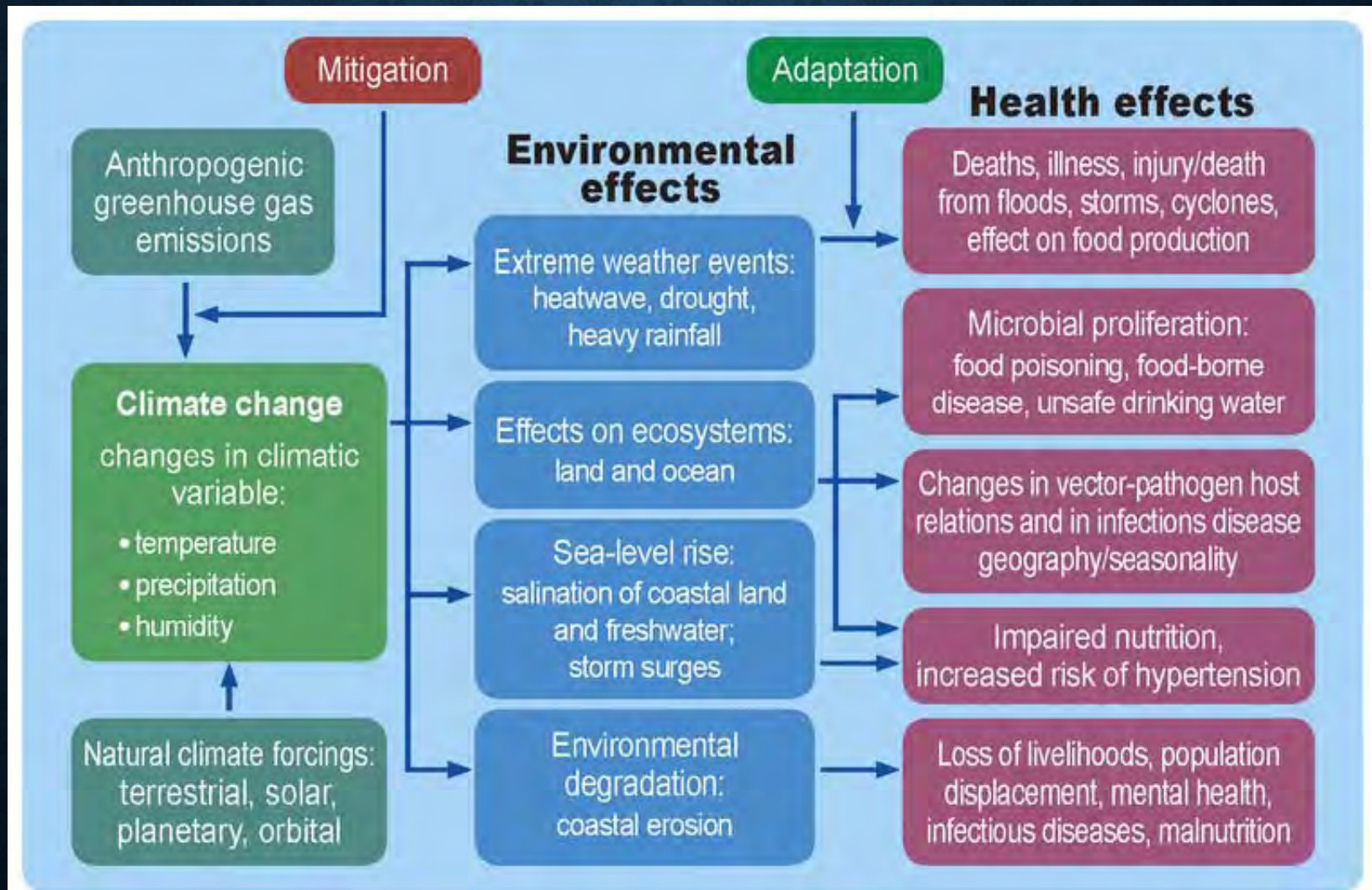


HEATWAVES TILL 2017

- We have done a lot to prevent and mitigate Heat wave related Deaths.
- Not only Death but Heat Related Illness is also a major concern.
- We also Know ,several sectors have a role to play.
- We have reduced mortality substantially, we have to work lot harder for not allowing it again to rise.

- Who are We?
- Who needs to do What?
- Sector Specific Actions and Operating Procedures
- Cohesion ,Networking and Working in a symbiotic / Chain reaction approach.





2015-16 WAS A GAME CHANGER IN HUMANITARIAN SECTOR.

DRR CCA SDG 2030 GOALSETTERS

- Be it HYOGO , SENDAI or BANGKOK declaration for DISASTERS.

Controlling MORBIDITY AND MORTALITY are always going to be the
1st and 2nd Indicators for resilience.

- Can not be achieved without robust **healthcare delivery mechanism and healthcare resilience strategy.**
- Even if there is no of **ABSOLUTE RESILIENCE** –
Holistic health concerns are a priority .
- In short we have a **lot of work to do** and **our work is never ending.**

MEDICAL PREPAREDNESS AND MASS CASUALTY MANAGEMENT INITIATIVES IN INDIA

NDMA Guidelines

- Medical preparedness and Mass Casualty management
- Biological Disasters
- Hospital Safety

NDMA Publications on

- Beyond Pandemic preparedness
- management of dead
- minimum standard of medical care in relief shelters

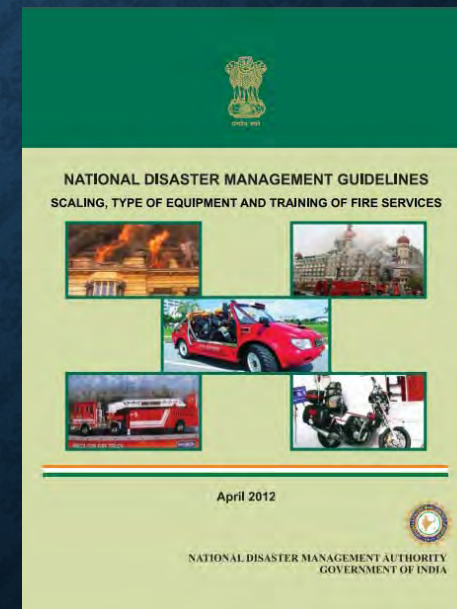
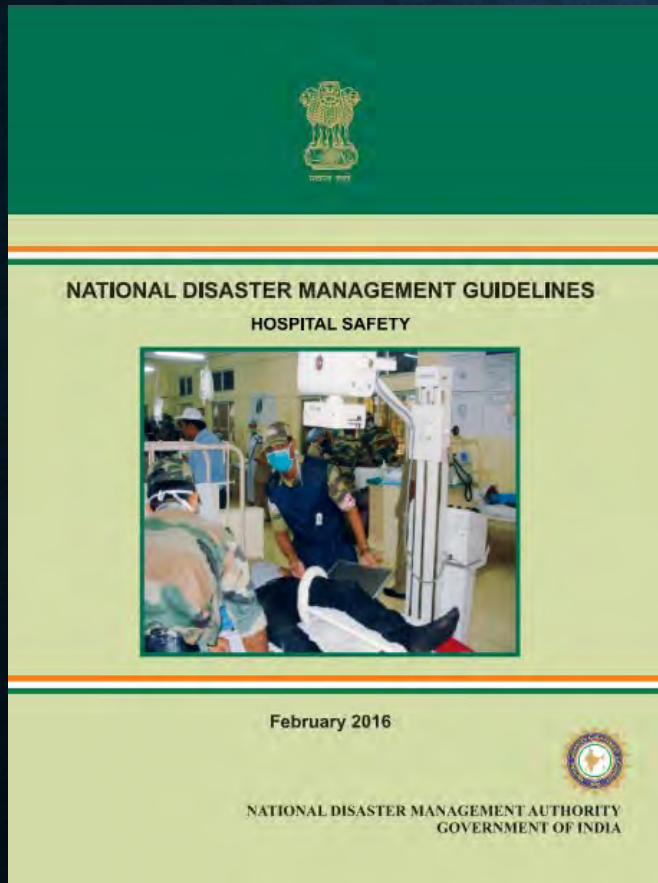
WHERE TO START

- NDMA has Formulated Guidelines on

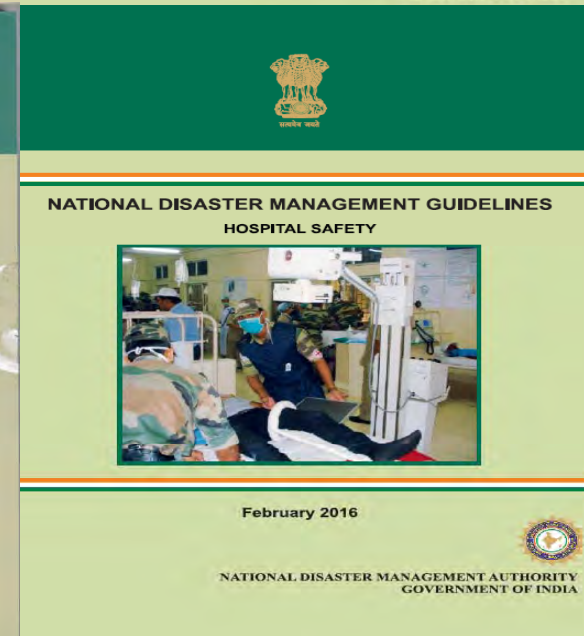
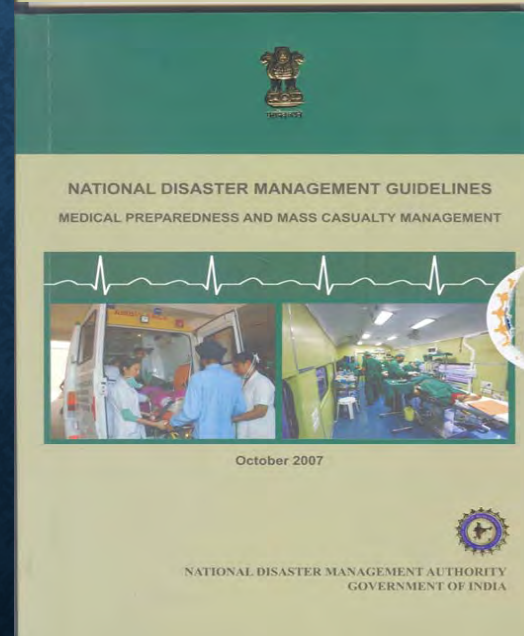
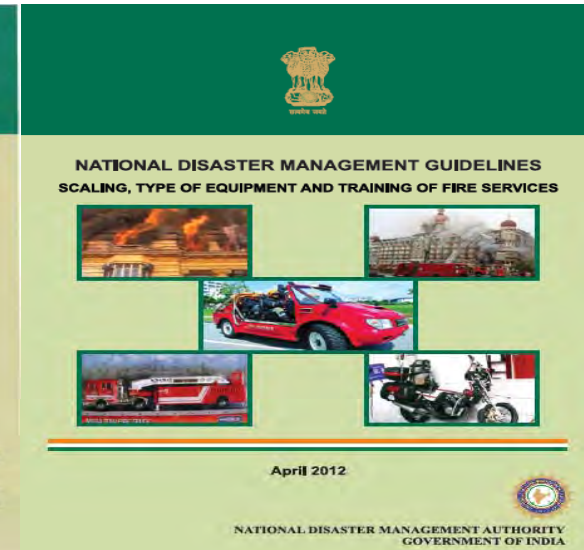
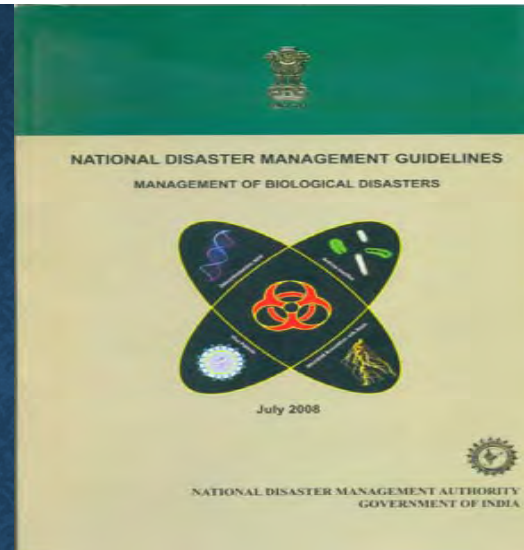
Hospital safety (Released Feb 2016 – Most recent)

Scaling, Type of Equipment and Training of Fire Services

Medical Preparedness and Mass Casualty management

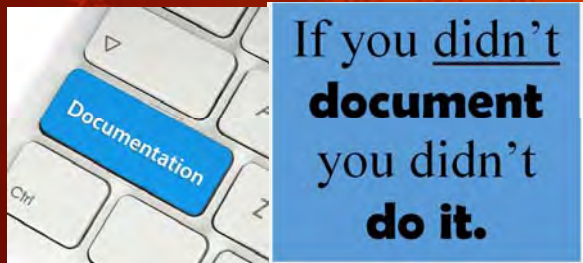
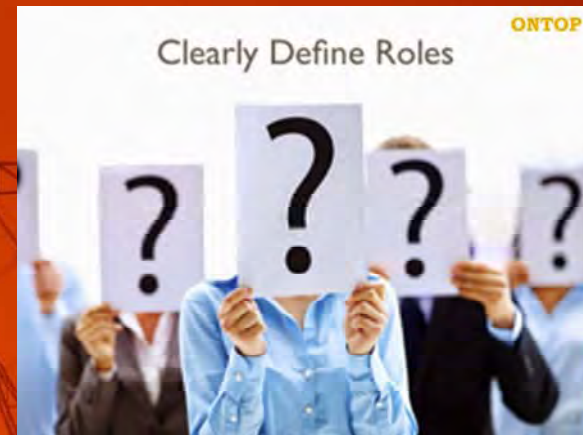


GUIDANCE NEEDED



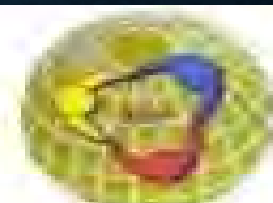


**HON'BLE PRIME MINISTER SHRI NARENDRA MODI
RELEASED THE NATIONAL DISASTER MANAGEMENT
PLAN (NDMP) ON 01.06.2016. THIS IS THE FIRST
EVER NATIONAL PLAN PREPARED IN THE COUNTRY.**





Documentation: Reporting Format



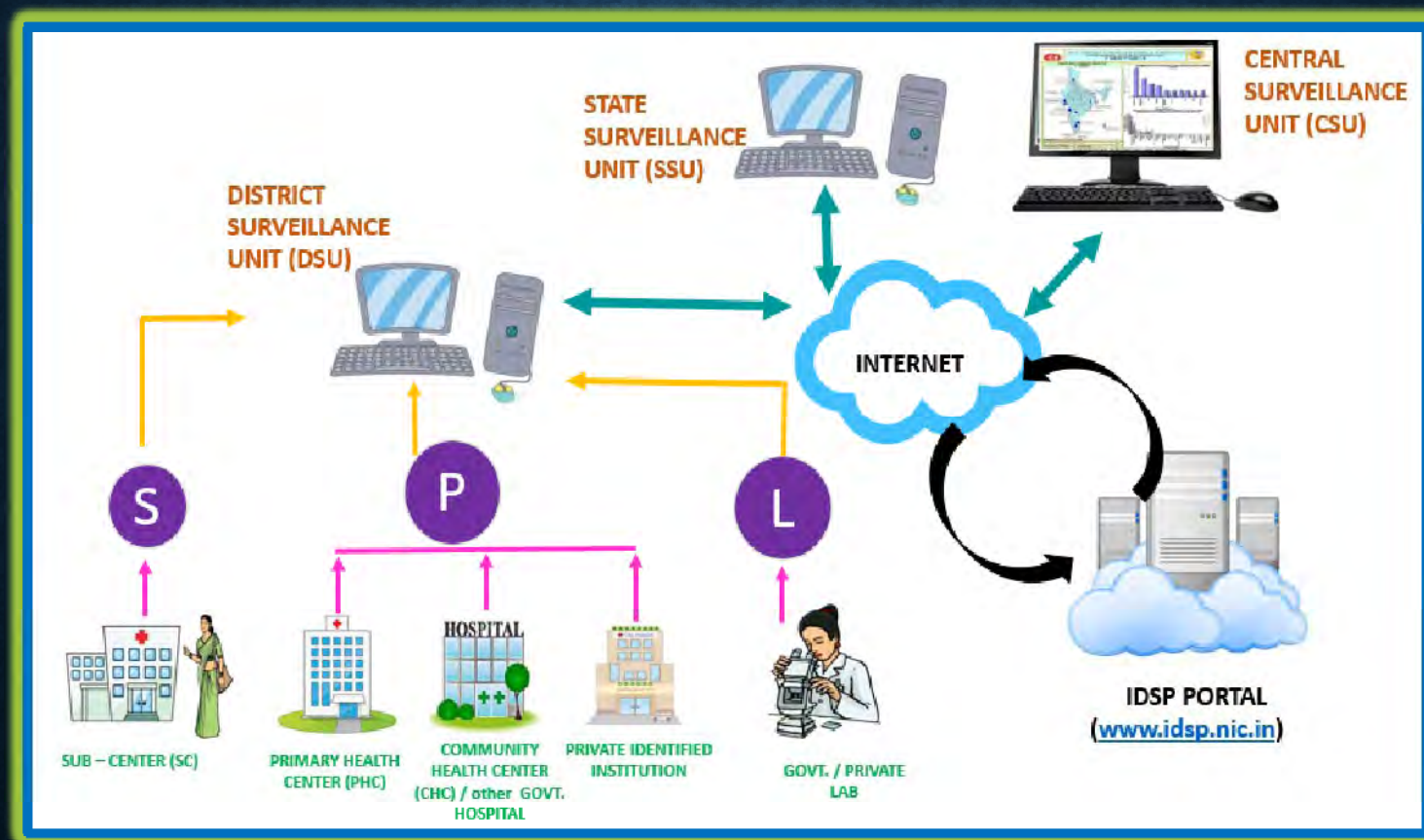
- IDSP has designed the format for collection the morbidity and mortality data from affected States on daily basis and shared with vulnerable States.

FORMAT USED FOR DAILY REPORTING

DEATHS DUE TO HEAT RELATED ILLNESS – Name of the State:					Date:
Sl.No.	Name of the District	New cases admitted due to Heat Related Illness in the District since the last reporting period	Cumulative no of cases admitted due to Heat Related Illness in the District	Deaths reported due to Heat Related Illness in the District since the last reporting period	Cumulative no of deaths due to Heat Related Illness in the District
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13	Total				

ID SP-NCDC, MOHFW, GOI, 22-Sham Nath Marg, Delhi – 110 054

INFORMATION FLOW

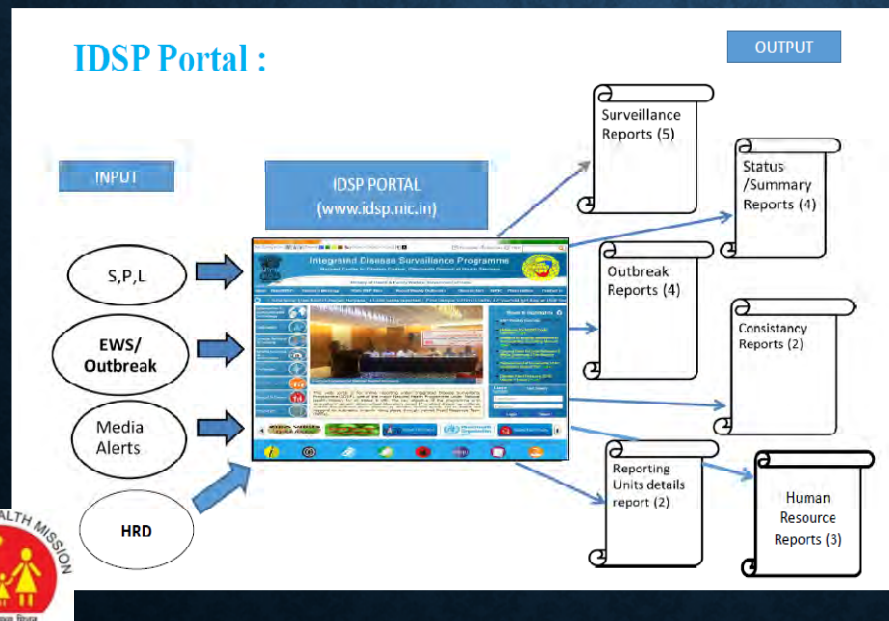


About 96% Districts report every week



INFORMATION & COMMUNICATION TECHNOLOGY (ICT) COMPONENTS

- Network
 - Data Centers
 - Training Centers
 - Video Conferencing System
- Software / IDSP Portal (www.idsp.nic.in)



VC session



STRATEGIC HEALTH OPERATIONS CENTRE (SHOC)



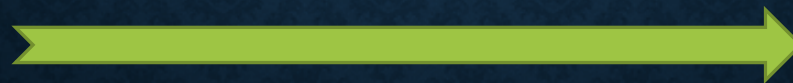
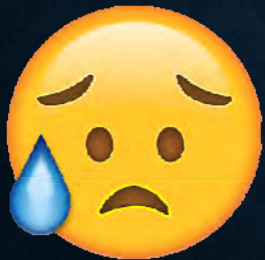
- Strengthening disease surveillance and response with connectivity to multiple sites at a time.
- Surveillance activities monitored with various sites concurrently
 - Monitoring disease distribution and trends
 - Prompt data analysis for decision making
 - Rapid data sharing and transmission
 - Develop the strategy and action plan
 - Mobilize support
 - Provide feedback
- SHOC activated:
 - Influenza A H1N1 outbreak & flood situation – activated during spurt in 2015, 2016, 2017 and 2018
 - Disease Surveillance during Mass Gathering in Simhastha Ujjain –16 Apr to 21 May, 2016
 - Since 2015, Data collection for heat related illness from the month of April to July every year



INTERVENTION AT TOP TO BOTTOM LEVEL

- Central Level
- State Level
- District Level
- Ward / Mandal Level – Community Level







How to Define
**ROLES, RESPONSIBILITIES &
HANDOVERS**

CLEVERISM.COM

MAJOR SECTORS : **BROADLY CLASSIFIED**

- Municipal Corporations
- Health care Workforce
- Administration and Governance ,DM machinery, Local Forecast agencies
- Surveillance and Documentation teams
- Central Ministries and Departments
- Local Bodies/ NGO / National grass root level organizations.





HEALTH SECTOR PLAYS THE MOST VITAL ROLE IN MANAGING HEATWAVE : **YET NOT GEARED UP**

- We as humans will not do anything for a problem, unless our health is affected.
- ICD 10 does not classify heatwave related deaths as a cause of mortality.
- Case fatality ratio / death to illness ratio – no major data available.
- Heatwave associated illnesses, socially linked behavioral change
- issues like hay dust, air quality, asthma worsening, food contamination are wider aspects to look at.
- both in Response and surveillance health has a major role to play.
- Simple interventions can lead to tangible results.
-

- Office work hours?
- both Govt and private

BUSINESS HOURS	
Sunday	Closed
Monday	9:00 AM - 6:00 PM
Tuesday	9:30 AM - 7:00 PM
Wednesday	9:00 AM - 8:00 PM
Thursday	9:00 AM - 9:00 PM
Friday	9:00 AM - 10:00 PM
Saturday	9:00 AM - 11:00 PM

OFFICE TIMETABLE	
9.00	STARTING TIME
9.30	ARRIVE AT WORK
9.45	COFFEE BREAK
11.00	CHECK E-MAIL
11.15	PREPARE FOR LUNCH
12.00	LUNCH
2.45	BROWSE THE INTERNET
3.00	TEA BREAK
4.00	PREPARE TO GO HOME
4.30	GO HOME
5.00	FINISHING TIME

•GOD working hours?

DARSAN TIMINGS			
MORNING			
03-30 am	TO	04-45 am	
06-30 am	TO	07-00 am	
08-30 am	TO	10-00 am	
10-30 am	TO	11-10 am	
11-45 am	TO	12-00 noon	
EVENING			
05-00 pm	TO	06-15 pm	
06-45 pm	TO	07-20 pm	

4:00 AM	Temple Opens
4:00 AM to 4:30 AM	Temple Puja, Abhishekham Tickets
4:30 AM to 7:30 AM	Abhisheka, Alankarana, Aarati, Prasad
7:30 AM to 12:00 Noon	Archana, Sarva Darshan, Aksharabhyas
12:00 to 12:13 PM	Nivedana and Aarati
12:30 PM to 2:00 PM	Temple Remains Closed
2:00 PM to 6:30 PM	Archana and Sarva Darshan,
Aksharabhyas and other pujas. This is Aksharabhyasam time.	
6:30 PM to 7:00 PM	Devasthanam Pradosha Puja
7:00 PM to 8:30 PM	Maha Aarati and Darshanam
8:30 PM	Temple will be closed

- What are our working hours hours?



- We are the last hope to many...
But these things will happen

But these things will happen



Hospital Preparedness Measures for Managing Heat related Illness: SOP

Director / In-charge of Hospitals in all States/Districts should ensure that the following measures are in place:

- A detailed action plan to tackle heat-related illnesses well in advance of hotter months.
- Standard Operating procedures to tackle all levels of heat-related illnesses. Capacity building measures for doctors, nurses and others staff should be undertaken.
- Cases with suspected heat stroke should be rapidly assessed using standard Treatment Protocols.
- Identify surge capacities and mark the beds dedicated to treat heat stroke victims and enhance emergency department preparedness to handle more patients.
- Identify RRT (Rapid Response Teams) to respond to any exigency call outside the hospitals.
- Ensure adequate arrangements of Staff, Beds, IV fluids, ORS, essential medicines and equipment to cater to management of volume depletion and electrolyte imbalance.
- May try to establish outreach clinics at various locations easily accessible to the vulnerable population to reduce the number of cases affected. Health Centers must undertake awareness campaigns for neighborhood communities using different means of information dissemination.
- Primary centers must refer the patients to the higher facility only after ensuring adequate stabilization and basic definitive care.
- Hospitals must ensure proper networking with nearby facilities and medical centres to share the patient load which exceeds their surge capacities.
- All cases of heat-related illnesses should be reported to IDSP (Integrated Disease Surveillance Programme) unit of the district.

NDMA (HEAT) SERIES- HEAT EXTREMES AWARENESS TRAINING : HEAT WAVE – ACTION FOR DOCTORS AND MEDICAL PROFESSIONALS

TOPICS

- 1 Introduction
- 2 NDMA guidelines
- 3 Role of Doctors
- 4 Hospital Contingency Planning
- 5 Pre-hospital Care
- 6 Community awareness
- 7 Criteria of diagnosis
- 8 Medico legal issues
- 9 Way forward

STAKEHOLDERS

- Public Hospitals
- Private hospitals
- Head of Emergency Departments
- Medical / Nursing Superintendents
- District Health Officers/ Chief Medical Officers
- Representative of AYUSH doctors/ organizations
- PHC/CHC and Community Healthcare Institutions
- Representatives from MoHFW.

NDMA (HEAT) SERIES- HEAT EXTREMES AWARENESS TRAINING : HEAT WAVE – ACTION FOR CITY ADMINISTRATION AND MUNICIPAL CORPORATIONS

TOPICS

- 1 Introduction
- 2 NDMA guidelines
- 3 Role of Municipalities
- 4 City Contingency Planning
- 5 Past success stories
- 6 Community awareness
- 7 Probable Interventions
- 8 Long term planning
- 9 Way forward

STAKEHOLDERS

- City Administration
- Municipal Corporation Representatives
- Emergency Support Functions Heads.
- CBO and NGO's
- District Health Officers/ Chief Medical Officers
- Representative of Community leaders
- Other Relevant stakeholders and Institutions

NDMA (HEAT) SERIES- HEAT EXTREMES AWARENESS TRAINING : HEAT WAVE – ACTION FOR SURVEILLANCE OFFICERS AND RRT TEAM MEMBERS

TOPICS

- 1 Introduction
- 2 NDMA guidelines
- 3 Role of RRT members
- 4 Criteria of diagnosis
- 5 Formats of reporting
- 6 Timelines and procedures
- 7 Integration through IDSP
- 8 Medico legal issues
- 9 Way forward

STAKEHOLDERS

- RRT units in most vulnerable units
- District surveillance units.
- State surveillance units.
- Public Hospitals /Private hospitals
- PHC/CHC and Community Healthcare Institutions
- National IDSP team and NCDC SHOC center.
- District Health Officers/ Chief Medical Officers

HOW TO WORK TOGETHER

- WE HAVE TO STEP OUT OF OUR TRADITIONAL ROLES.
- STOP BLAMING ON OTHERS
- COMMUNITY LEADERSHIP NEEDS TO EMERGE.
- HIGH TIME TO LINK MORTALITY /MORBIDITY AS A SUCCESS INDICATOR.
- TIME to emerge with our potential as a Specialized Well planned Sector.

A NEW JOURNEY JUST BEGUN... **Kneejerk Reactions**

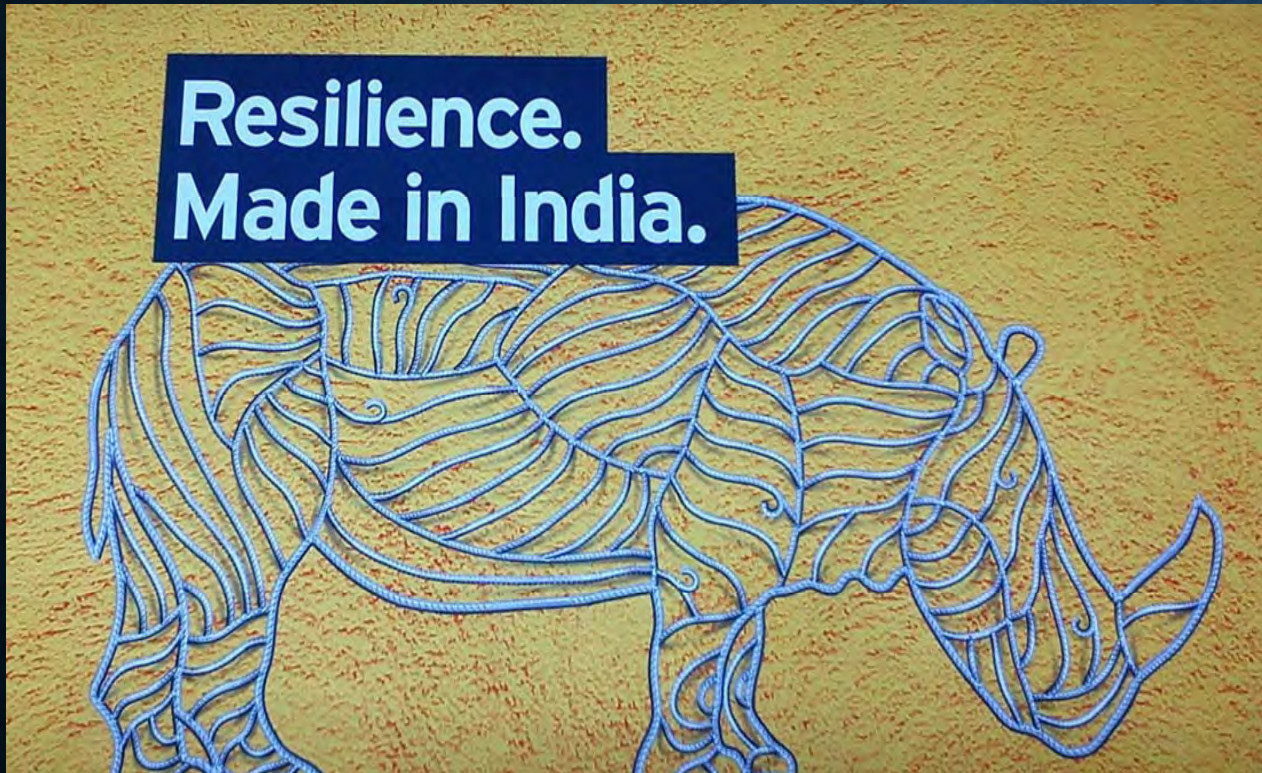
to

**Conditioned
Reflexes in
Response**

Resistance

To

Resilience



Can be achieved through 3 c's

C_{OMMAND}

C_{APABILITY}

C_{APACITY}



WITH



BAGAN DEHIDRASI HYDRATION CHART	
1	BAIK (GOOD)
2	BAIK (GOOD)
3	CUKUP (FAIR)
4	DEHIDRASI (DEHYDRATED)
5	DEHIDRASI (DEHYDRATED)
6	DEHIDRASI PARAH (SEVERELY DEHYDRATED)
7	DEHIDRASI BERAT (CRITICAL DEHYDRATION)

JIKA ANDA MERASA HAUS ATAU URINE ANDA DIAREA WARNA DARI 4 SAMPAI 7
MAKA ANDA DEHIDRASI - MINUM BANYAK AIR PUTIH

REMEMBER IF YOU FEEL THIRSTY OR YOUR URINE IS IN THE COLOUR RANGE OF FROM 4 TO 7
YOU ARE DEHYDRATED - DRINK MORE WATER



2015-2017 HEATWAVE ACTION PLAN OF INDIA

- IT IS A SUCCESS STORY
- REDUCED MORTALITY & MORBIDITY
- INCREASED INTERVENTIONS AT ALL LEVELS
- PLAYED ROLES BY ALL SECTORS
- A COLLABORATIVE SUCCESS AND AN EXAMPLE OF TRANSLATING PRACTICES IN ACTION

RESEARCH AREAS FOCUSSED

- Daily temperature + air pollution → mortality & hospital admissions
- Weather patterns and asthma occurrence
- Daily/weekly temp and food poisoning
- Climatic and environmental influences on Ross River Virus disease
- Drought severity and mental health (suicides)
- Modelling future changes in health risks w.r.t. climate-change scenarios

CHALLENGES STILL REMAIN....

- **Nothing big works unless its needed, backed by govt policies and facilitated by partners for execution.**
- **All of us have experiences workshops, trainings, seminars, conference, initiatives are hardly 10 % of work done. Major 90 % gap is at ground coordination and execution and lack of implementation.**
- **HEALTH SECTOR IS THE TOUGHEST NUT TO CRACK**
- **Community capacity building is a distant dream.**

TAKE HOME MESSAGE

- Never Play in Isolation as a specialty.
- Disasters will not just happen in other states and countries.
- We are not Superheroes -

So prepare yourself and calculate your risks as well.

- Epidemics (Viz a Viz) are Unavoidable.
- Data collection / Analysis will not be done by your colleague.
- Individual Survival and Security holds the key to future.
- Aim “**ALL READY**” for “**SAFE SMART HEALTHIER AND RESILIENT INDIA**”.
- *We as a Healthcare System are a **last hope to many**.*
- *Its not always about crisis but society needs us everyday **24 x 7**.*
- *We never had and **never will deny** our services.*

THANKS



WARN , PREPARE & ACT