

Training Completion Report
Sensitisation-Cum-Training workshop on Management of
Heat Stress and Related Illness

(Medical Stakeholders)

Conducted by
Indian Institute of Public Health (IIPHB), Bhubaneswar

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Summary

i)	Title	Sensitisation-Cum-Training workshop on management of Heat Stress and Related Illness (Medical Stakeholders)
ii)	Supported by	Odisha State Disaster Management Agency (OSDMA), Bhubaneswar and IRADe, New Delhi
iii)	Conducted by	Indian Institute of Public Health (IIPHB), Bhubaneswar & Public Health Foundation of India
iv)	P.I. of the project	Dr Bhuputa Panda, Addl. Professor, IIPHB
v)	Duration of each batch	One and half days (residential)
vi)	Number of batches	Two
vii)	Training Venue	Hotel Richi Regency, Bhubaneswar
viii)	Number of Districts and participants	Districts covered-30 Trainees / Participants-174
ix)	Category of trainee participants	(a) Deputy Collectors (Emergency); (b) District Emergency Officer; (c) Medical Officers; (d) District Education Officers; (e) District Project Officers; etc
x)	Session details (1 st Day)	1) Inaugural Session 2) Technical Session-1: Vulnerability Assessment 3) Technical Session-2 & 3: Early Warning & Systems' Readiness 4) Technical Session 4: Clinical Management of Heat Stress related illnesses 5) Filling up of Assessment Form
xii)	Session details (2 nd Day)	1) Technical Session 5: Monitoring and Surveillance of Heat Mortality 2) Recap of the previous day 3) Technical Session-6: Presentation on 'SATARK' warning system of OSDMA 4) Discussion on "post-mortem" by OSDMA experts 5) Technical Session 7: Group Activity of Heat Action Plan Preparation 6) Valedictory Session & Certificates

Training Completion Report

Sensitisation-Cum-Training Workshop on Management of Heat Stress and Related Illness (Medical Stakeholders)

Introduction

The State Odisha has been a disaster-prone State which witnesses many types of natural calamities such as, cyclones, floods, droughts and heat waves in the past. Considering the importance of special response and rehabilitation needs of the vast majority of rural population, new strategies of action plans, advisories and directives and resource allocation for infrastructure building and community empowerment have been emphasized upon as the risk reduction approaches by the government. With successful management of natural disasters, Odisha has emerged as a pioneer before the rest of the world for its pre-emptive action and preparedness in the domain of disaster management. During last two decades instances of **‘heatwave and related illnesses’** have increased in the State and therefore involvement of medical stakeholders in the planning and management of such illnesses becomes imperative for development of a resilient health system in the State. IIPH Bhubaneswar in collaboration with OSDMA (Govt of Odisha) and IRADe, New Delhi highlighted the need to sensitize the key medical stakeholders of district and state level officials who would subsequently act as master trainers for the block level officials. They would not only play a critical role in development of heat action plans for their respective districts but also lead the capacity building activities in the field.

Capacity building workshops were successfully conducted in the month of March, 2021 at Hotel Richi Regency at Bhubaneswar (List of participants in Annexure). Thematic experts and resource persons from IIPH Bhubaneswar; IRADe, New Delhi; IIPH Gandhi Nagar; and OSDMA, Government of Odisha facilitated various technical sessions through online and offline modes. A reference guide (developed by IIPHB) was given to the participants in hard copies, while all presentations and discussion points were given in the soft copy to the participants.

Resource Persons

Resource Persons	Expertise	Topics in Training Programme
Prof. Ajit Tyagi, Senior Advisor at IRADe, New Delhi; President of Indian Meteorological Society	Prof Ajit Tyagi, PhD, is a renowned meteorologist. He has served as Assistant Chief of Air Staff (Meteorology), Director General of Meteorology. He has significant contribution in the quality of Weather Forecasts and Warnings of disasters. As DGM, Dr Tyagi successfully implemented the first phase of IMD modernization covering observations, communication, data processing, forecasting and dissemination	Introduction to Climate change and heat wave: World, India and Odisha.
Dr Dileep Mavalankar, Director, IIPHG	Dr Mavalankar, MD, has extensively worked in environmental health issues across India. He has led the vulnerability assessment studies in Gujarat and is serving as a Consultant to many national and international agencies in India and abroad.	Early Warning and Systems' readiness-heat alert, heat action plan, health advisory.
Dr Bhuputra Panda, Addl. Professor, IIPHB	Dr Panda, PhD (Public Health-TISS) is a faculty and a researcher in Odisha with domain expertise on health systems research, environmental health and governance in health. He is a high quality trainer in the discipline of public health and has covered many dimensions of Public Health studies over last two decades.	Vulnerability Assessment with groups, areas, occupations, past studies and tools.
Dr Ambarish Dutta, Additional Professor, IIPHB	Dr Dutta, PhD, is trained in epidemiology and public health. He leads implementation research projects in various domains of public health over last two decades, including infectious diseases and modelling.	Monitoring and Surveillance of heat mortality and morbidity-data, sources and analysis.
Dr Priya Dutta, Visiting Faculty Member, IIPHG	Dr Dutta, PhD, has more than 14 years of experience in various fields of environmental science, public health, climate change and occupational health. Currently she is affiliated to IIPH Gandhi Nagar.	Early Warning and Systems' readiness-heat alert, heat action plan, health advisories.
Dr Upasona Gosh, Senior Lecturer, IIPHB	Dr Ghosh, PhD, has a decade-long research experience on social issues and health. She focusses on social determinants of health and role of climate change on health and livelihood.	Introduction to climate change; Early Warning and Systems' readiness; Heat alert, heat action plan and health advisory.
Dr JP Mishra,	Dr J P Mishra, MD, is a Senior	Clinical management of heat

Paediatrics Specialist	Paediatrician, under Government of Odisha. He has special experience of providing treatment for disaster affected victims, especially heat related illnesses.	stress cases- signs, symptoms and hospital preparedness.
Dr Kamal Lochan Mishra, ED, OSDMA	Dr Mishra, PhD, is a senior bureaucrat with government of Odisha, Additional Secretary, and a trainer in the domain of environmental health and disaster management.	Heat alerts, advisories, IEC/BCC and Role of OSDMA.
Sri Tarakesh Lakshman, OSDMA	Sri Lakshman is a Senior Consultant with OSDMA. He leads the SATARK platform for early warning on disastrous events.	Importance of SATARK App for disaster management and risk reduction.

Session Details

The total one and half day programme was segmented into 9 sessions including six technical sessions, one group activity session and two inaugural & valediction sessions. Day I of the workshop included four technical sessions, while Day II had two technical sessions. Group work and presentation by group members were undertaken for each batch.

Day I

Inaugural Session: With the introductory remarks by Dr Bhuputra Panda, Additional Professor of IIPHB and PI of the programme, the workshops were formally inaugurated by guests from OSDMA. Dr Kamal Lochan Mishra, Executive Director of OSDMA, Sri Satya Ranjan Sahoo, Chief General Manager, OSDMA and Mr Meghnad Behera, State Project Officer participated from time to time.

Introductory session on climate change: Prof Ajit Tyagi, Senior Advisor of IRADe, New Delhi, through virtual mode, highlighted about climate change, global warming and heat waves across the globe, in India and in Odisha. He explained that heatwave is the silence killer and offered a multi-pronged approach to address heat stress related illnesses: (a) Inter-sectoral coordination & early warning, (b) Heat Action Plan preparation, (c) Vulnerability Assessment and (d) Capacity building. He also focussed on the topic of behaviour change and use of renewable energy to avoid global warming.

Address by Director, IIPHB: Dr Subhash Salunke, Director of IIPHB also joined the training workshops, virtually. Expressing his sincere thanks to government of Odisha and participants, he encouraged them to pursue the training seriously and participate in the plan preparation actively.

Technical Session on Vulnerability Assessment: Dr Bhuputra Panda led this session and defined 'Vulnerability' as the inclination of an entity or a system to be negatively influenced by a hazard. He covered topics of sensitivity and adaptive capacity. Vulnerable can be assessed on the base of both individual biophysical and population-level characteristics. In order to explain factors contributing to heat stress and adaptation, studies conducted in Ahmedabad and

Bhubaneswar were discussed by him. He highlighted the need to undertake vulnerability studies in small towns and blocks across the State and offered support to the participants.

Technical Session on Early Warning: Prof. Dileep Mavalankar, Director of IIPH Gandhi Nagar and Dr Priya Dutta, Consultant in IIPHG, jointly took the session on Early Warning and Systems' Readiness to address heat stress in the State. They highlighted about the experience of Ahmedabad city in terms of action plan preparation, and discussed about how the color-coded warning system evolved to help the district administration prepare in advance. Dr Priya expressed her satisfactory remarks on how the first Heat Action Plan of South Asia region was prepared by IIPH Gandhi Nagar. She added the points of interventions as early warning, public awareness, capacity building and message of prohibition to heat exposure.

Technical Session on Health Advisories and Heat Alerts: Dr Upasana Gosh, Senior Lecture of IIPHB discussed about thermal extremes and their impact on health and livelihood. She also highlighted about the factors responsible for increasing vulnerability of the population. She led the group works and mentored the groups during group work preparation.

Technical Session on Clinical Management: Dr J P Mishra, a Paediatrician, presented many dimensions, situations and requirements of clinical management of heatwave victims. He taught on the topics of various types of heatwave related illnesses, the clinical protocols to deal with each of those and the need for strengthening the hospitals. Focusing on the food and clothing practices of individuals, he emphasized upon the role of medical stakeholders in clinical management of cases. He also narrated the DO's and DONT's and gave importance to the system of referral and counselling.

Day II

Technical Session on Monitoring and Surveillance: Dr Ambarish Dutta took a session on monitoring and surveillance of heat stress related events. He advocated for the faultless data collection and the need for active surveillance of mortalities and morbidities.

Technical Session on 'SATARK': Mr Tarakesh Lakshman, OSDMA, provided information on SATARK-OSDMA App as a tool to alert the community on various disasters much in advance. He also demonstrated the audience as to how to download and use of the App.

Group Work on HAP: On the basis of 2 days learning, groups were formed and asked to develop the district heat action plans. Each group collectively and comprehensively presented their plans. The group work sessions were full of active participation by all the members and that all the groups have had successfully prepared their Action Plans which covered all the dimensions of heatwave management: vulnerable pockets, previous record of temperature and geophysical condition of the districts.

Valedictory Session: Dr Kamal Lochan Mishra, Sri Satya Ranjan Sahoo, Smt Susmita Behera, and Sri Meghanath Behera, OSDMA attended the valediction sessions. It was also advised that the trainees should commit time and resources for their districts to implement all that they learnt during the workshop. Many participants discussed about the kind of challenges they were facing

in their workplaces to deal with heat stress related events. However, they showed their commitment to train officials working down below as to better prepare their districts.

Logistics and Accommodation

Good quality accommodation arrangements were made in Richi Regency Hotel, Nayapalli, Bhubaneswar, for all participants on a single occupancy basis for two nights. For the comfortable staying experience and Covid compliance, all the possible measures were taken up by the Hotel. IIPHB provided hard copy of one guide (in booklet format) and one pen drive (containing power point presentations) to each participant.

Conclusion

The training sessions were really interactive, informative and interesting. Although many participants were involved in day-to-day planning and management of heat stress related emergencies in their respective districts/ blocks, still they were happy with the content and quality of the workshop, as they provided positive feedback about the same.

Photo Gallery

Training on Heat Stress Management (Medical Stakeholders), 26 March, 2021



Training on Heat Stress Management (Medical Stakeholders), 31 March, 2021



Annexure-1: List of Participants

Sl No	Name of Participants	Designation	District
Batch: 25th - 26th March, 2021			
01	Dr. Satyanarayan Sahoo	Medical Officer	Angul
02	Dr. Tapaswini Mishra	Medical Officer	Angul
03	Dr. Arup Kumar Das	Medical Officer	Balasore
04	Dr. Satyanarayan Nayak	Medical Officer	Balasore
05	Dr. Debabrata Jena	Medical Officer	Balasore
06	Dr. Dasaratha Tudu	Medical Officer	Bhadrak
07	Dr. Subash Chandra Naik	Medical Officer	Bhadrak
08	Dr. Sarada Prasanna Mallik	Medical Officer	Deogarh
09	Dr. Rabindra Nath Marandi	Medical Officer	Deogarh
10	Dr. Manoj Kumar Mohanty	Medical Officer	Dhenkanal
11	Dr. Chinmay Kumar Samal	Medical Officer	Dhenkanal
12	Dr. Ramesh Mallik	Medical Officer	Jajpur
13	Dr. Pradeepta Kumar Sahoo	Medical Officer	Jajpur
14	Dr. Rahul Mohanty	Medical Officer	Jagatsinghpur
15	Dr. Nirlipta Nayak	Medical Officer	Jagatsinghpur
16	Dr. Abinash Chakra	Medical Officer	Keonjhar
17	Dr. Sattwik Acharya	Medical Officer	Keonjhar
18	Dr. Saswati Mohanty	Medical Officer	Keonjhar
19	Dr. Bhakta Prasanna Swain	Medical Officer	Kendrapara
20	Dr. Biplob Kumar Swain	Medical Officer	Kendrapara
21	Dr. Baijayanti Jena	Medical Officer	Khordha
22	Dr. Tanmoy Tripathy	Medical Officer	Khordha
23	Dr. Chandini Mishra	Medical Officer	Khordha
24	Dr. Debasis Nayak	Medical Officer	Mayurbhanj
25	Dr. Pratik Nayak	Medical Officer	Mayurbhanj
26	Dr. Bidulata Das	Medical Officer	Nayagarh
27	Dr. Rajendra Mallik	Medical Officer	Nayagarh
28	Dr. Ashutosh Jena	Medical Officer	Puri
29	Dr. Jyotiranjana Sahu	Medical Officer	Puri
30	Dr. Santanu Kumar Jena	Medical Officer	Puri
31	Dr. Ramakrishna Pati	Medical Officer	Sambalpur
32	Dr. Lambodar	Medical Officer	Sambalpur
33	Dr. Chittaranjan Das	Medical Officer	Sambalpur
34	Dr. Niroj Kumar Meher	Medical Officer	Sambalpur

Batch (30 th – 31 st March, 2021)			
01	Dr. Srimanta Ranjan Swain	Medical Officer	Boudh
02	Dr. Mahendra Soy	Medical Officer	Boudh
03	Dr. Pradeep Kumar Naik	Medical Officer	Bolangir
04	Dr. Prabhat Kumar Rath	Medical Officer	Bolangir
05	Dr. Birendra Kishore Nayak	Medical Officer	Ganjam
06	Dr. Pranabananda Patro	Medical Officer	Ganjam
07	Dr. Dolamani Tandi	Medical Officer	Jharsuguda
08	Dr. Sasmita Tirkey	Medical Officer	Jharsuguda
09	Dr. Sourav Saha	Medical Officer	Kalahandi
10	Dr. Rajesh Maharana	Medical Officer	Kalahandi
11	Dr. Golkesh Prasad Mantri	Medical Officer	Kalahandi
12	Dr. Sadab Quadri	Medical Officer	Kandhamal
13	Dr. Sasmita Devi	Medical Officer	Kandhamal
14	Dr. Dillip Kumar Biswal	Medical Officer	Koraput
15	Dr. Karisma Kasturi Mishra	Medical Officer	Koraput
16	Dr. Soumyajit Panigrahi	Medical Officer	Koraput
17	Dr. Shakti Ranjan Mallick	Medical Officer	Malkanagiri
18	Dr. Ansari Majhi	Medical Officer	Malkanagiri
19	Dr. Dillip Kumar Sahu	Medical Officer	Malkanagiri
20	Dr. Sangya Das	Medical Officer	Rayagada
21	Dr. Abhisek Nayak	Medical Officer	Rayagada
22	Dr. Gopal Panda	Medical Officer	Rayagada
23	Dr. Sabyasachi Sahu	Medical Officer	Subarnapur
24	Dr. Manoranjan Panda	Medical Officer	Subarnapur
25	Dr. Trilochan Barik	Medical Officer	Sundargarh
26	Dr. Chandan Garnayak	Medical Officer	Sundargarh
27	Dr. Rabi Ranjan Mishra	Medical Officer	Sundargarh

SENSITIZATION-CUM-TRAINING WORKSHOP ON MANAGEMENT OF HEAT STRESS AND RELATED ILLNESSES CONDUCTED BY IIPH-BHUBANESWAR

Day 1 Session time	Topic	Resource Person
10.00 am to 10.15 am	Registration	IIPHB team
10.15 am to 10.30 am	Inauguration	MD-OSDMA; ED-OSDMA /CGM-OSDMA
10.30 am to 10.45 am	Welcome address	Dr Subhash Salunke, Dir, IIPHB
10.45 am to 11.30 am	Introduction to climate change and heat wave: World, India and Odisha	Prof Ajit Tyagi Sr Adv (IRADe) / Mr Rohit Magrota, Dy Dir (IRADe)
11.30 am to 11.45 am - Tea		
11.45 am to 1.00 pm	Vulnerability assessment Groups, areas, occupations, past studies and tools	Dr Bhuputra Panda, Addl Prof (IIPHB)
1.00 pm to 1.45 pm - Lunch		
1.45 pm to 3.15 pm	Early warning and systems' readiness – heat alert, heat action plan, health advisory, role of OSDMA	Dr Kamal Mishra, ED (OSDMA) / Dr Upasona Ghosh, Sr Lect (IIPHB) / Dr Priya Dutta (IIPHG)
3.15 pm to 3.30 pm - Tea		
3.30 pm to 4.30 pm	Clinical management of heat stress cases – signs, symptoms, hospital preparedness	Dr J P Mishra (Paediatrician, Govt of Odisha) / Medicine Specialists
4.30 pm to 5.30 pm	Monitoring and surveillance of heat mortality and morbidity - data, sources, analysis	Dr Ambarish Dutta, Addl Prof (IIPHB)

Day II Session time	Topic	Resource Person
10.00 am to 10.30 am	Recap of day I	IIPHB Faculty members
10.30 am to 11.15 am	Group work on development of region-specific heat action plan	Moderators: IIPHB faculty members
11.15 am to 11.30 am - Tea		
11.30 am to 11.45 am	Presentation on 'SATARK' by OSDMA team	OSDMA team
11.45 am to 12.30 pm	Presentation on Post-mortem reports related to heat stress deaths	OSDMA team
12.30 am to 1.30 pm	Presentation on HAP by group members	NA
1.30 pm to 2.00 pm	Certificate distribution Valedictory and vote of thanks	OSDMA team Faculty of IIPHB
1.00 pm to 2.00 pm - Lunch and departure		