



सत्यमेव जयते

Government of India

Ministry of Health and Family Welfare



**TRAINING MANUAL for
STATE and DISTRICT NODAL OFFICERS for
IMPLEMENTATION of
HEAT HEALTH ACTION PLAN**



**National Programme
on Climate Change
and Human Health**



Ministry of Health
and Family Welfare
Government of India



National Programme
on Climate Change
and Human Health



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1. Introduction

The direct physical impacts of climate change, including the changes to temperature, precipitation, and the frequency and intensity of extreme events, is impacting water availability, agricultural systems, and disease vectors, to name but a few (Dutta, Golechha and Mavalankar 2021). Heat waves are expected to become more frequent due to a changing climate as a result of progressive environmental degradation and a lack of concrete action toward reducing carbon emissions or temperature reductions (WHO, 2021). It is important to track the health effects of climate change, among which heat-related illness is of significant importance (Golechha, et al. 2021). Heat-related adverse health events and sequelae including death occur in both direct and indirect manner (Kovats et al, 2008). Therefore, it is essential to understand and identify the occurrence of extreme heat events to enable health systems, communities, and individuals to cope with them. In the past two decades, India has recorded more than 25, 000 deaths, and under-reporting or the lack of appropriate attribution to heat is suspected (NDMA Guidelines for Preparation of HAP, 2017). Several more deaths may have occurred as a result of extreme heat, and this number is to increase significantly due to predictions from global bodies, nearly doubling in the coming two decades (WMO, 2021).

Purpose of Training:

This training manual has been prepared to equip the programme representatives at the state level with their roles and responsibilities related to heat action plan management and implementation. Heat-induced health discomforts are increasing globally as well as nationally. It is pertinent, therefore, to strengthen the capacities of the healthcare personnel in better management of heat-related illnesses in the country.

2. Heat Wave

A heat wave is a prolonged period of temperature above normal (excessive heat), defined as “when the daily maximum temperature of more than five consecutive days exceeds the average maximum temperature by 5°C”, as per the World Meteorological Organisation (WMO). In India, the Indian Meteorological Department (IMD) describes a heat wave under the following criteria for different topographic regions in the country-

Departure from normal temperature

- Heat Wave: within 4.5°C to 6.4°C
- Severe Heat Wave: greater than 6.4°C

Warm Night: It should be considered only when the temperature remains 40 °C or more. It may be defined based on departure or actual minimum temperature as follows:

- Warm night: within 4.5°C to 6.4°C.
- Very warm night: greater than 6.4°C

Actual Maximum Temperature (in the plain regions)

- Heat Wave: $\geq 45^{\circ}\text{C}$
- Severe Heat Wave: $\geq 47^{\circ}\text{C}$

Along the coastline, when temperatures exceed 4.5°C from the normal, or the actual maximum is upwards of 37°C, a heat wave is declared.

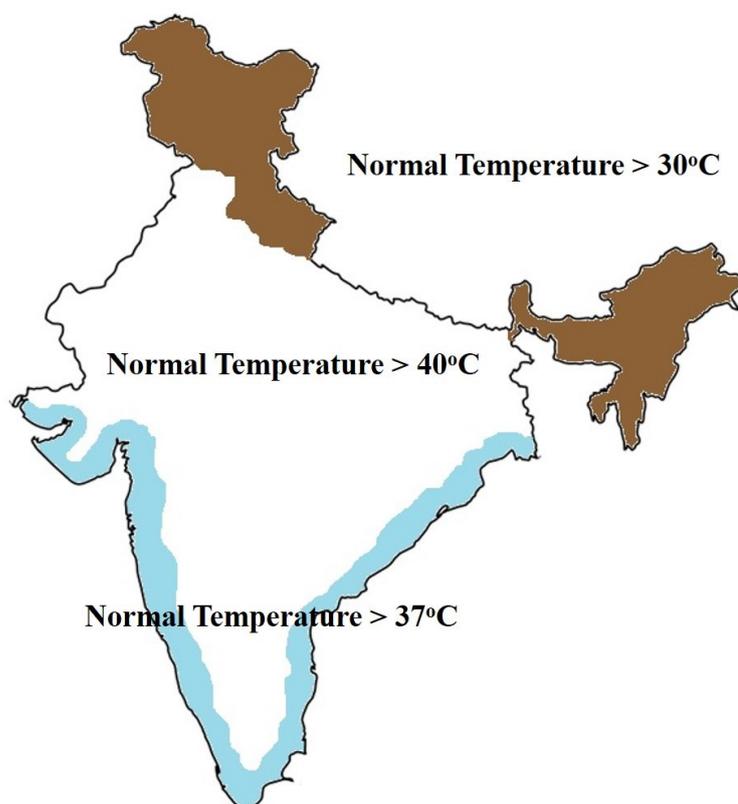


Figure 1: Schematic of heat wave temperatures in different topographic regions

3. IMPLEMENTATION OF HEAT ACTION PLAN

The State Nodal Officer is the responsible authority for the implementation of the Health Action Plan at the local level, it involves the appointment of a **Nodal Officer**. This individual will serve as a point of coordination and communication, to implement relevant measures before, during, and after the extreme heat season.

Phase 1 – Pre-Heat Season (January-March)

- Convening high-level inter-agency meetings for a periodic review of the Health Action Plan and the incorporation of novel eventualities
- Area mapping to plan and execute targeted activities
- Enlisting high-risk areas of the state vulnerable to heat waves for more focused activities on heat prevention
- Re-engaging state and local agencies to facilitate internal communications
- Identifying the key community and non-governmental actors to facilitate the implementation of the Heat Action Plan and awareness generation activities, especially last-mile outreach
- Organizing preventative training and outreach efforts for health workers, link workers, school children, and the local community with the Health Department
- Setting up targeted distribution channels for multilingual awareness materials and IEC among different population groups

- Establish Heat Wave Action Web Page on Disaster Management / District Website

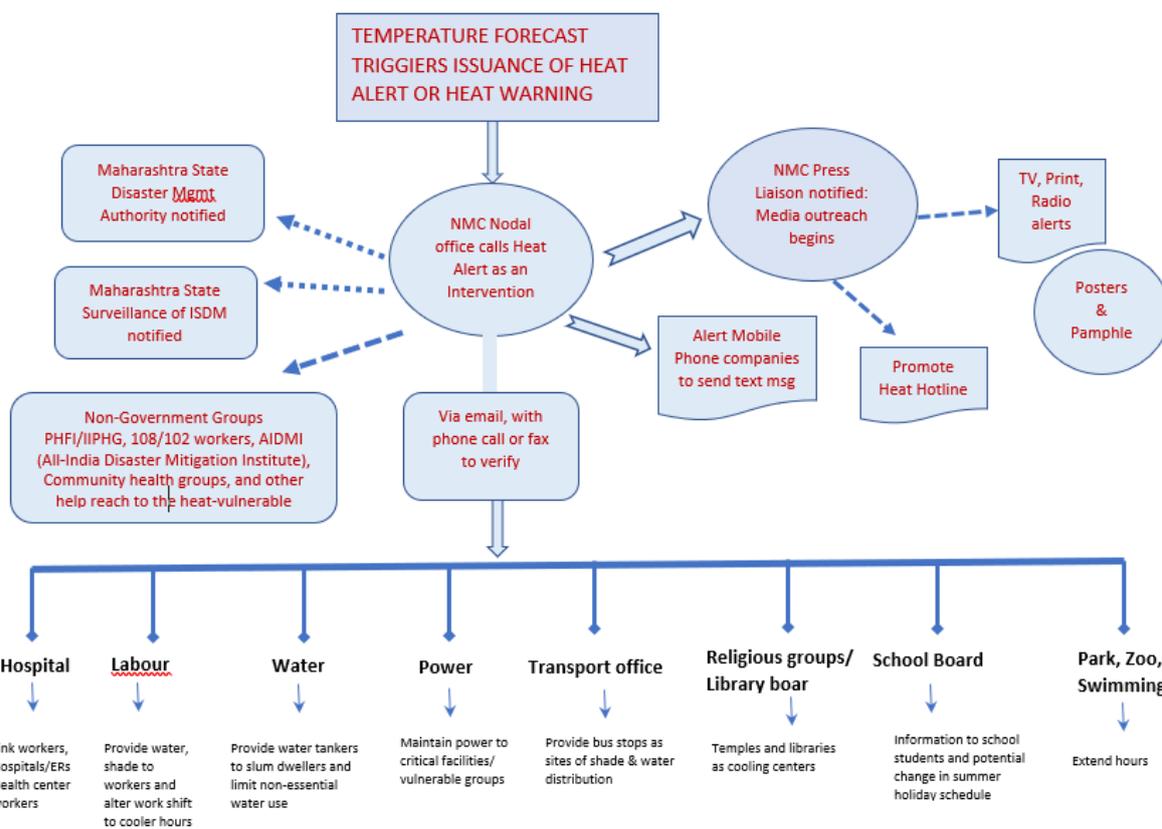


Figure 2: Communication Plan When the NMC Nodal Officer Activates a Heat Alert

Phase 2 – During the Heat Season (March-July)

- Creating an active heat alert and appropriate local response when a heat wave event is identified by the meteorological department
- Notifying key agency leaders and ensuring functioning communication channels with all the stakeholders
- Modifying heat alert level in accordance with the severity of changing temperature thresholds and the latest forecast
- Notifying relevant stakeholders when the heat alert has passed
- Communicating locations of emergency facilities and cooling centers / shaded areas with each department /organization
- Expanding access to shaded areas for outdoor workers, slum communities, and other vulnerable populations. For example, confirm that night shelters stay open all day for migratory populations during a heat alert
- Conducting daily conference calls to discuss reports and breaking developments during a heat alert, and ensure that communication channels remain operational
- Identifying and setting up public displays of temperature and forecasts, such as LED electronic scrolling boards
- Continued surveillance of temperature data and forecasts
- Instructing water department or local municipal department to ensure availability of staff and clean drinking water during a heat alert
- Informing power supply, companies to prioritize maintaining power to critical facilities (such

- as hospitals and UHCs)
- Notify the Steering Committee and relevant agencies when the heat alert is over

Phase 3 – Post-Heat Season (July-September)

- Convening annual evaluation meetings with relevant stakeholders for the review of the Health Action Plan
- Review of quantitative and qualitative data for process evaluation and improvement
- Evaluate the reach and impact of the plan and revise accordingly. Revision of the plan is to be based on the performance feedback
- Build on the “Green Cover” activity to establish a tree-plantation campaign in hotspot areas such as roadsides and during the plantation festival in June. Incorporate student volunteers or incentivize builders to plant trees to help this effort

4. SURVEILLANCE OF HEAT-RELATED ILLNESSES (FORMATS WITH STANDARD OPERATING PROCEDURES)s

FORMAT 3 (B): DISTRICT FORMAT FOR SENDING TO STATE

Daily numbers of Suspected Heatstroke CASES# and All-cause DEATHS*

(Compiled from Format 3 A)

(To be sent to State Nodal Unit daily while keeping a copy for the record)

Cases and deaths due to heatstroke- District name 20__				Date of reporting: __/__/__					
Date	Total patients of the day (Emergency Medicine + Emergency Paediatrics + Casualty)	New Suspected Heatstroke Cases (A)	Total Suspected Heatstroke cases since 1st March, 20__ (B)	All-cause deaths**				New Confirmed Heat-stroke Deaths***	Total Confirmed Heat Deaths since 1st March 20__
				Suspected Heatstroke deaths## (a)	Confirmed CVD deaths (b)	Others including unknown (c)	Total deaths (a+b+c)		
01-03-2020									
02-03-2020									

Name of person filling the form:

Name of nodal officer:

Designation:

Signature of nodal officer:

Signature:

Date:

Figure 3: Format 3(B)

****All-cause death:** All of the deaths in casualty/emergency medicine plus pediatrics, regardless of cause.

#Suspected Heatstroke: Altered mental status (including disorientation, delirium, seizure, obtundation) **with elevated core body temperature $\geq 40^{\circ}\text{C} \geq 104^{\circ}\text{F}$** , without signs of stroke, history of infection, or signs of medication overdose or Altered mental status (including disorientation, delirium, seizure, obtundation) with hot and dry skin and deranged vitals i.e., tachycardia, tachypnoea and wide pulse pressure without signs of stroke, history of infection, or signs of medication overdose. *(definition is applicable during heatwave season, i.e., March-July)*

##Suspected Heatstroke Death: This is death on account of the suspected heatstroke patient.

***Cardiovascular Death** includes death resulting from an acute myocardial infarction (MI) or sudden cardiac arrest or heart failure (HF) or cardiovascular (CV) procedures or CV hemorrhage or death due to other CV causes.

*****Confirmed Heatstroke Death:** A suspected heatstroke death confirmed by the death investigation committee (heat death committee/three men committee) at the district level

Standard Operating Procedures: Format 3 (B)

(District format for sending to State)

1. **Format 3 (B)** will be compiled by a nodal officer **daily** at the District nodal unit.
2. **Format 3 (B)** will be compiled from the end row of **Format 3 (A)**.
3. **Time of reporting to state nodal unit:** Format 3 (B) compiled from Format 3 (A) should be reported to the state nodal unit on the following day (**day one**) by **04.00 PM**.
4. **Reporting after a holiday: Format 3 (B)** which should have been prepared on holiday (e.g. Sunday) must be compiled and prepared on the next working day. For example, facility reports (Format 2) submitted to the district on Saturday must be compiled on **Format 3(B)** on Monday, along with a separate **Format 3(B)** for facility reports submitted to the district on Sunday.
5. **Nil reporting is mandatory in the prescribed format.** No columns shall be left blank; in case of nil reporting, “0” should be written.

Confirmed Heatstroke Death: a suspected heatstroke death is to be reported as and when the death is confirmed by the death committee (heat death committee/three-man committee) at the district level.

Guidelines for the analysis of suspected Heatstroke cases and deaths

1. Analysis should be done at the District Surveillance Unit by the nodal officer
2. Periodicity of analysis will be weekly. Data from the previous week, i.e. Monday to Sunday, should be analysed by Tuesday of the current week.
3. Analysed report should be e-mailed to the State Surveillance Unit by Tuesday 04:00 PM.
4. Analysis is to be done on time, place, and person indicators as shown below.

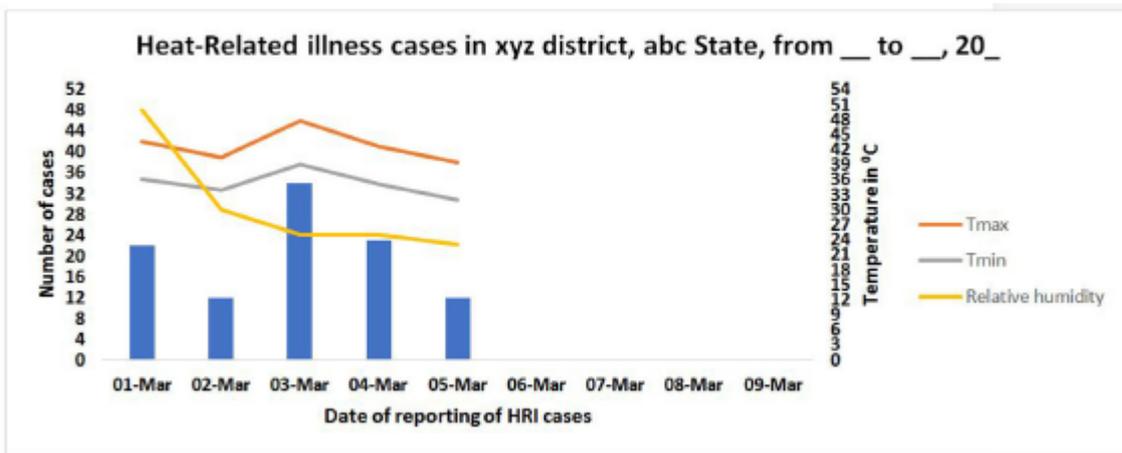
Use the following formats depending on the analysis type required.

Analysis Type	Presentation	Data Source
1. Time distribution of HRI cases	Graph	<ul style="list-style-type: none"> • Format 1- line list submitted by health facilities • Temperature maximum and minimum data from Indian Meteorological department
2. Place distribution of HRI cases and deaths	Map	<ul style="list-style-type: none"> • Format 3 prepared at district level • District map with block (equivalent unit) boundaries
3. Age (person) distribution of heatstroke cases and deaths	Table or Bar Diagram	<ul style="list-style-type: none"> • Format 1- line list submitted by health facilities

Time distribution of HRI cases:

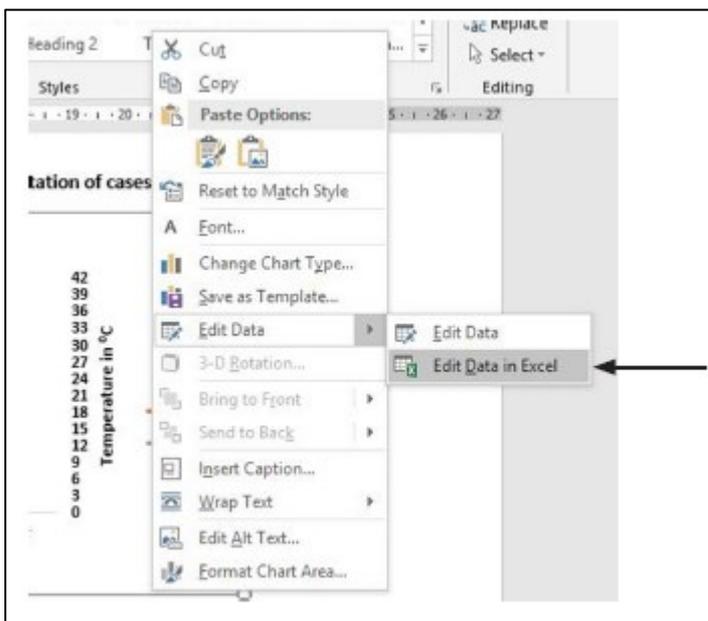
1. Coordinate with the Indian Meteorological Department at the district level to get the data for daily temperature (maximum and minimum) and relative humidity.
2. Plot temperature (maximum and minimum) against the number of cases for your district.
3. Prepare the time distribution graph, as shown below. You can prepare such a graph yourself. If you would like to use a preformatted graph template, follow the steps explained below

Figure X. Distribution of HRI cases with Temperature (maximum & minimum) over a time period (---/20—to ---/20--) in(Name of District)



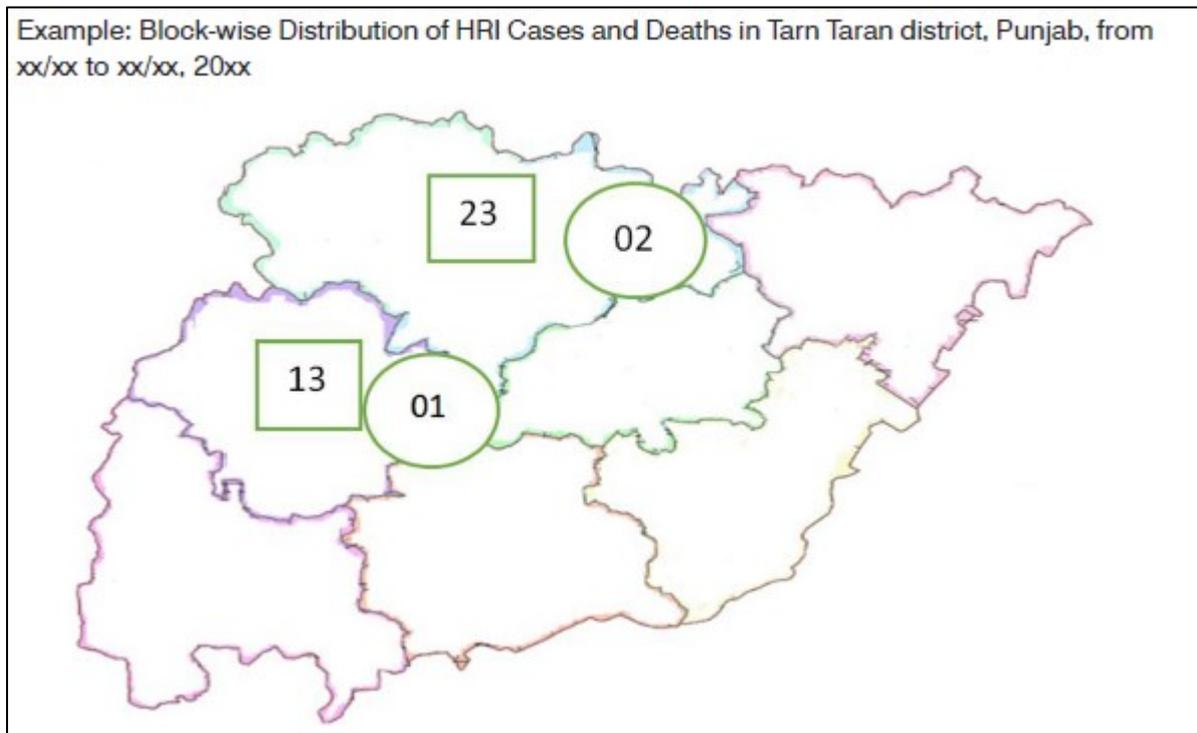
Steps for creating/ updating time distribution graph

1. Use the graph template to show the time distribution of cases or you can insert your own graph. If using the same template
 - a. Click the graph à right-click on the outer border
 - b. Choose Edit data à click “edit data in excel”
 - c. In the excel sheet, fill the number of HRI cases under the cases column according to the dates of their presentation (NOT by the date of reporting).
 - d. Fill the maximum and minimum temperature under Tmax and Tmin and relative humidity.
 - e. The graph will automatically update to reflect the inserted data.
 - f. Save the excel file and keep adding new data to generate weekly reports.



	A	B	C	D
1		Cases	Tmax	Tmin
2	01-Mar	22	42	36
3	02-Mar	12	39	34
4	03-Mar	34	46	39
5	04-Mar	23	41	35
6	05-Mar	12	38	32
7	06-Mar			
8	07-Mar			
9	08-Mar			
10	09-Mar			

2. Place distribution of cases and deaths in the district map (weekly report)
 - a. Show a weekly total of cases and **confirmed** deaths in your district for each block.
 - b. Write a total number of cases in a box and the number of deaths in a circle shape, as shown in the example below
 - c. Make sure that the total number of cases include those cases who have died. For example, 23 cases in a square also includes two cases who are dead, which shows that out of 23 cases, two cases died (confirmed of HRI) in that block in a reporting week
 - d. You can prepare this map either digitally or on a hard copy and attach it to the report accordingly



3. Age distribution of heatstroke cases and deaths in a reporting week. Use age groups mentioned below to analyse line list details for cases and deaths diagnosed with heatstroke

Age Group	# Heatstroke cases	#Heatstroke deaths	Total
<1 year			
1-5 years			
6-15 years			
16-60 years			
>=61 years			
Total			

FORMAT 4 (A): STATE FORMAT FOR DAILY COMPILATION (district wise)

Daily numbers of Suspected Heatstroke CASES[#] and all-cause DEATHS^{*}

(To be sent to the Central Nodal Unit daily while keeping a copy for record)

Cases and deaths due to Heatstroke- State name 2020						Date of reporting: _/_/2020				
S. No.	Name of District	Total patients of the day (Medicine + Paediatrics + Casualty/ Emergency)	New cases of Heatstroke (A)	Cumulative total of Heatstroke cases since 1st March 2020 (B)	All-cause deaths**				New Con-firmed Heat-stroke Deaths***	Total Confirmed Heatstroke Deaths since 1st March 2020
					Suspected Heatstroke deaths## (a)	Con-firmed CVD deaths* (b)	Others including unknown (c)	Total deaths (a+b +c)		
1	District 1									
2	District 2									
3	District 3									
	Total									

Name of person filling the form:

Designation:

Signature:

Name of nodal officer:

Signature of nodal officer:

Date:

Figure 4: Format 4(A)

****All-cause death:** All of the deaths in casualty/emergency medicine plus pediatrics, regardless of cause.

#Suspected Heatstroke: Altered mental status (including disorientation, delirium, seizure, obtundation) **with elevated core body temperature $\geq 40^{\circ}\text{C}$ / $\geq 104^{\circ}\text{F}$** , without signs of stroke, history of infection, or signs of medication overdose **OR** Altered mental status (including disorientation, delirium, seizure, obtundation) with hot and dry skin and deranged vitals, i.e., tachycardia, tachypnoea and wide pulse pressure without signs of stroke, history of infection, or signs of medication overdose. *(definition is applicable during heatwave season, i.e., March to July)*

##Suspected Heatstroke Death: This is a death on account of a suspected heatstroke.

***Cardiovascular Death** includes death resulting from an acute myocardial infarction (MI) or sudden cardiac arrest or heart failure (HF) or cardiovascular (CV) procedures or CV haemorrhage or death due to other CV causes.

*****Confirmed Heatstroke Death:** A suspected heatstroke death confirmed by the death investigation committee (heat death committee/three-person committee) at the district level.

Standard Operating Procedures: Format 4 (A)

(State format for sending to centre)

1. **Format 4** will be compiled from data reported by all districts by the nodal officer at the state nodal unit daily.
2. **Districts** will report health facility-wise aggregate number of cases due to suspected heatstroke. Also, the aggregate number of all-cause deaths with segregation of suspected heatstroke deaths confirmed CVD deaths and others.
3. **Time of reporting:**
 - a. Health facility to district nodal unit: **Cases diagnosed on day zero** (from 00.01 hr to 24.00 hr of a day) at health facilities to be reported to district nodal unit on day 1 (i.e. next day) at 12:00 noon in **Format 2**. The daily compiled report from the district nodal unit (**Format 3**) should be submitted to Integrated Disease Surveillance Programme (IDSP) at the district Surveillance unit (DSU) through the proper channel by **01:00 PM** on day 1 (i.e. next day).
 - b. District to State: by **04:00 PM** the **day 1**.
 - c. State to centre: by **05:00 PM** the **day 1**.
4. **Data compilation:** A soft copy of **Format 4** in the form of an excel sheet shall be e-mailed **daily** to the Central unit through the proper channel. A date-wise soft copy of each daily **Format 4** report should be maintained digitally in a designated folder. A hard copy of **Format 4** should be kept daily in a designated file at the state level.
5. **Data collection period:** In standard, it will be from **01st March to 31st July every year**. Further direction will be communicated during the start of the year if required.
6. No report by a district:
 - a. If **Format 3** from a district is not received on time, write “**delayed**” in the row for that district.
 - b. If the district reports to the state after the deadline of 4.00 PM, **Format 4** should be updated to reflect the change. **Format 4** for the given reporting period can be updated till 48 hrs and should show an updated date of reporting, if applicable.
 - c. If a district does not submit **Format 3** at all, or submits it after 48 hrs of reporting deadline, **Format 4** of that reporting period should be updated, i.e., “delayed” should be changed to “**not available**” for that district.
7. **Changing a filed report:** A submitted **Format 4** can be changed only if an update is generated by a health facility and communicated to the district within 48 hrs of the reporting deadline. Updated **Format 4** for that reporting period should be submitted again to the Central unit with a new date of reporting if applicable.
8. **Reporting after a holiday:** A **Format 4**, which should have been prepared on holiday (e.g. Sunday), must be compiled and submitted on the next working day. For example, **Format 4** for Saturday must be compiled on Monday along with a separate **Format 4** for Sunday.
9. **Nil reporting is mandatory in the prescribed format.** No columns shall be left blank; in case of nil reporting, “0” should be written.
10. **If not submitted on time:** Late report must be filed within 48 hrs with the correct date of reporting
11. **Analysis:** Analysis of the data should be done every week according to the guidelines provided here.

FORMAT 4(B): STATE FORMAT FOR DAILY COMPILATION (day wise)

Daily numbers of Suspected Heatstroke CASES[#] and all-cause DEATHS^{*}

(To be kept at the state for record)

Cases and deaths due to Heatstroke- State name 2020							Date of reporting: _/~/_		
Date	Total patients of the day (Medicine + Paediatrics + Casualty/ Emergency)	New cases of Heat-stroke (A)	Cumulative total of Heatstroke cases since 1st March, 2020 (B)	All-cause deaths**				New Confirmed Heatstroke Deaths***	Total Confirmed Heatstroke Deaths since 1st March 2020
				Suspected Heatstroke deaths## (a)	Confirmed CVD deaths* (b)	Others including unknown (c)	Total deaths (a+b+c)		
01-03-20									
02-03-20									
Total									

Name of person filling the form:

Name of nodal officer:

Designation:

Signature of nodal officer:

Signature:

Date:

Figure 5: Format 4(B)

****All-cause death:** All of the deaths in casualty/emergency medicine plus pediatrics, regardless of cause.

#Suspected Heatstroke: Altered mental status (including disorientation, delirium, seizure, obtundation) **with elevated core body temperature $\geq 40^{\circ}\text{C}$ / $\geq 104^{\circ}\text{F}$** , without signs of stroke, history of infection, or signs of medication overdose **OR** Altered mental status (including disorientation, delirium, seizure, obtundation) with hot and dry skin and deranged vitals, i.e., tachycardia, tachypnoea and wide pulse pressure without signs of stroke, history of infection, or signs of medication overdose. (*definition is applicable during heatwave season, i.e., March to July*)

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*****Confirmed Heatstroke Death:** A suspected heatstroke death confirmed by the death investigation committee (heat death committee/three-man committee) at the district level.

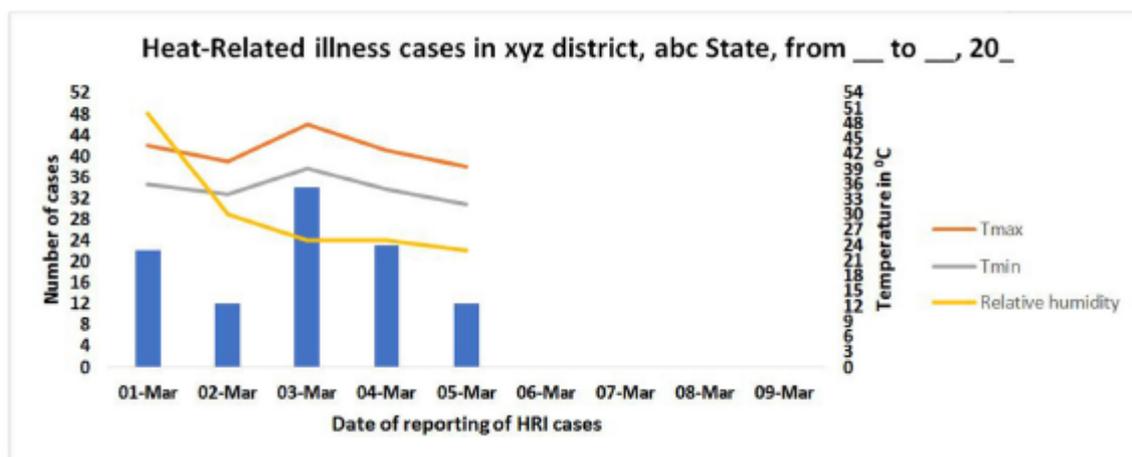
Guidelines for analysis of HRI Cases and Deaths

1. Analysis should be done at the State Surveillance Unit by the nodal officer.
2. Periodicity of analysis will be weekly. Data from the previous week, i.e. Monday to Sunday, should be analysed by Tuesday of the current week.
3. Analysed weekly report is to be kept at State Surveillance Unit.
4. Analysis is to be done on time and place indicators, as shown below.
5. Use the following formats depending on the analysis type required.

Analysis Type	Presentation	Data Source
Time Distribution of HRI cases	Graph	<ul style="list-style-type: none"> • Format 4 submitted by districts • Min. and Max. temperature data from IMD
Place distribution of HRI cases	Map	<ul style="list-style-type: none"> • Format 5 prepared at state level • State map with district boundaries

Time distribution of HRI cases:

1. Coordinate with the Indian Meteorological Department at the state level to get data for Temperature (maximum and minimum) and relative humidity.
2. Plot temperature (maximum and minimum) against a number of cases for your district.
3. Prepare the time distribution graph, as shown below. You can prepare such a graph yourself. If you would like to use a preformatted graph template, follow the steps explained below



Steps for creating/ updating time distribution graph

1. Use the Graph template to show the time distribution of cases or you can insert your own graph. If using the same template
 - a. Click the graph à right-click on outer border.
 - b. Choose Edit data à click “edit data in excel”
 - c. In the excel sheet, fill the number of HRI cases under the cases column according to the dates of their presentation (NOT by date of reporting).

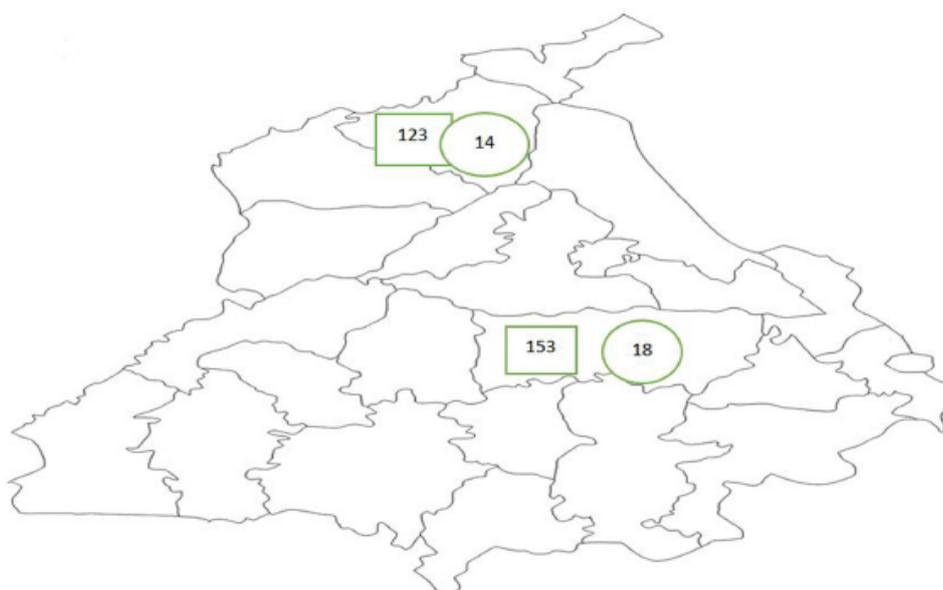
- d. Fill the maximum and minimum temperature under Tmax and Tmin and relative humidity.
- e. The graph will automatically update to reflect the inserted data.
- f. Save the excel file and keep adding new data to generate weekly reports.

	A	B	C	D
1		Cases	Tmax	Tmin
2	01-Mar	22	42	36
3	02-Mar	12	39	34
4	03-Mar	34	46	39
5	04-Mar	23	41	35
6	05-Mar	12	38	32
7	06-Mar			
8	07-Mar			
9	08-Mar			
10	09-Mar			

2. Place distribution of cases and deaths in the district map (weekly report)

- a. Show a weekly total of cases and **Confirmed** deaths in your state for each district
- b. Write a total number of cases in a box and the number of deaths in a circle shape, as shown in the example below
- c. Make sure that the total number of cases include those cases who have died. For example, 123 cases in a square also includes 14 cases who are dead, which shows that out of 123 total cases, 14 died (confirmed of HRI) in that district in a reporting week
- d. You can prepare this map either digitally or on a hard copy and attach it to the report

Example: District-wise Distribution of HRI Cases and Deaths in Punjab, from --/--/20—to --/--/20—



Investigation of Suspected Heatstroke Deaths

Confirmation of a suspected heatstroke death requires a detail death investigation akin to a social autopsy especially, when a suspected heatstroke case fails to access a health care facility to receive timely and adequate treatment. All suspected heatstroke deaths should be investigated using format provided in [National Action Plan on Heat Related Illnesses](#), Chapter 7 within 48-72 hours of a suspected non-accidental death during summer/heatwave.

Following are the guidelines for investigation and reporting of a confirmed heatstroke death.

1. Any of the following should fill the HRI and death investigation form:
 - a. Medical officer of Primary Health Centre or Community Health Centre.
 - b. Doctor on duty in health facility/hospital where the suspected case of HRI died.
 - c. Epidemiologist doing HRI death investigation.
2. Data sources to fill the form are as follows:
 - a. Deceased's photo ID record: aadhar card/pan card/voter ID/ration card/driving licence, etc.
 - b. Respondent's photo ID record: aadhar card/pan card/voter ID/ration card/driving licence, etc.
 - c. Past medical records.
 - d. Hospital medical record
 - e. Interview with the relatives/caretakers/neighbour/person brought or saw the ill or suspected deceased.
 - f. Weather record from Indian Meteorological Department (IMD) website or IMD office.
3. Unique ID:
 - a. The unique ID will be as local government directory available at <https://lgdirectory.gov.in/>
4. Section A: deceased's details
 - a. Section A.1 to A.6.: The name, age, sex, father's/spouse's name, residential address should be as per valid government ID. The information taken from government ID or relative or some other source should be mentioned in the remarks box.
 - b. Section A.7: Current occupation: Within a week of death.
Note: The activities/occupational activities just before death/onset of symptoms will be mentioned in section D.
5. Section B: Death detail
 - a. Section B.2.: Place the deceased found: The purpose of getting information on the place where the decedent was found dead is to know the circumstances in which the death of person occur and to correlate it with the weather condition of that area (*the weather condition will be recorded in section H*).
 - b. The name of the hospital where the deceased was brought dead or declared dead is for record purpose.
6. Section C: Clinical history in the past 24 hr before death (from medical record and relatives)
 - a. The answers for this section should be extracted from medical records. If the information is not available from medical records, then it should be sought from respondents/relatives.
 - b. Symptoms at the time of onset of illness: for diagnosis purpose
 - c. Date and time of onset: for correlating with climate variables of that day and time.
 - d. Place of onset of symptoms: for correlating with climate variables of that place.
 - e. Did the deceased have an alcoholic beverage within a day of onset of illness?: for contributing factors

7. Section D: Outdoor activities just before the onset of illness:
 - a. Section D. requires the details of whether the decedent was outdoor/indoor before/during the onset of symptoms.
8. Section E: Indoor conditions just before the onset of illness
9. Section F: Other non-Heat-Related questions, i.e., chronic, acute and medication history.
 - a. Medical record: Any public or private facility or pharmacy note
10. Section H: Weather data from the India Meteorological Department
11. At the bottom of the form, give the details of the person filling the form with his/her name, designation, signature and date of signing. The form should be filled as by the person mention in the first point.

Integrated Digital Heat-Related Illness Surveillance

The current HRI surveillance formats are under process of digitation on existing Integrated Health Information Platform (IHIP). This will allow data entry from health facilities at level equivalent to IDSP P-form. From next year, all the health facilities, PHC and above, of heat-prone States/UT will require to submit daily data on IHIP.

There will be components of digital HRI surveillance.

a. HRI data collection

A P-form user, once logged into to the IHIP platform, will be able to access the HRI data collection page through a separate link for National Programme on Climate Change and Human Health (NPCCHH). Total numbers of emergency visits (medicine, casualty, paediatrics), **suspected heatstroke cases and deaths, confirmed cardiovascular deaths** and other unknown deaths that occurred in the health facility during 24hr period of 8:00am previous day to 8:00am on the day of reporting should be submitted daily as per the case definition provided. For suspected heatstroke cases and deaths, patient details limited to their socio-demographic information, provisional diagnosis and circumstances of onset of heatstroke should be entered to allow better understanding of impact of ambient heat.

Reporting of a confirmed heatstroke death

The digital data collection will allow uploading of completed suspected death investigation. Uploading of completed investigation report will be allowed at health facility and also at district level. A blank data collection form (as per Chapter 7 of National Action Plan on Heat-Related Illnesses) will be available for download on the data collection page itself.

b. HRI dashboard

The integrated dashboard will provide visualization of health data with observed meteorological parameters like daily maximum and minimum temperatures and relative humidity from India Meteorological Department. Time (daily, weekly, monthly) and place (up to district level) distribution of suspected heatstroke cases and deaths will be visualized. Monitoring of trends of all-cause deaths and emergency OPD visits with maximum temperatures will provide understanding of overall health impact and health serviced demand.

District, state and central level access will allow near real-time tracking of heat and its health impacts at the respective levels for necessary action.

A step-by-step guidance manual and trainings will be provided in due course.