Climate Change and Health Indicators under India's National Programme on Climate Change and Human Health

Dr. Aakash Shrivastava  MD, MPH, PhD (Éire)
Additional Director and Head
Centre for Environmental Health and Occupational Health, Climate Change and Health
National Centre for Disease Control, India
NPCCHH Background

- Implemented through *Ministry of Health and Family Welfare*

- Introduced under *‘Mission on Health’* under Prime Minister’s Council on Climate Change in 2014

- **National Action Plan on Climate Change and Human Health (NAPCCHH)** prepared by National Expert group, 2015, revised in 2021

- **Goal:** To reduce morbidity, mortality, injuries, and health vulnerability to climate variability and extreme weather
Climate Sensitive Health Issues

Prioritized

- Air pollution related illnesses (ARI)
- Heat related Illnesses (HRI)
- Green and Climate resilient Infrastructures
- Vector-borne diseases
- Extreme weather events
- WASH/Water-borne diseases

- Cardio-pulmonary Diseases
- Nutrition Diseases and Food security
- Zoonotic diseases
- Allergic diseases
- Mental Health
- Coastal and Mountain region issues
- Occupational Health

Technical support from subject specific Centers of Excellence
Key Objectives

1. Generating Awareness
   - IEC Campaigns
   - Sensitization Workshops
   - Advisories

2. Capacity Building
   - Training of health care workers/professionals
   - Guidelines, manuals

3. Strengthen Health Sector preparedness
   - Health Adaptation Plans- Climate Sensitive Disease/Issue-Specific
   - Vulnerability assessment
   - Enhanced Surveillance
   - Early Warning, Alert and Response System (EWARS)
   - Green & resilient health care facilities

4. Collaborative Partnerships
   - Synergizing Inter-Ministerial efforts
   - Collaboration with other missions, national programmes, organizations

5. Research & Development
Organizational Framework

Prime Minister’s Council on Climate Change
Mission on Health

Ministry of Health and Family Welfare (MoHFW),
Govt of India

Central Component
NPCCH-HQ, NCDC

State Component

State Environmental Health Cell (EHC)
Governing Body (GB)
Multisectoral Task Force (TF)

State Nodal Officer

District EHC & Task Force

District Nodal Officer

Centers of Excellence
Indian Inst. of Medical Research
Ministries, Programmes
Gov, CSO, International agencies
Climate Change and Health Indicators
Heat & Health

National Heat-Related Illness (HRI) Surveillance

- Initiated in 2015
- Currently, expanded to 23 heat-vulnerable states
- March 1-July 31
- Reporting units: Primary, secondary, and tertiary care health facilities

<table>
<thead>
<tr>
<th>Data collected (daily)</th>
<th>Indicators</th>
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</thead>
<tbody>
<tr>
<td>All heat-related illness cases</td>
<td>• HRI morbidity, mortality incidence</td>
</tr>
<tr>
<td>(mild to severe form)</td>
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<tr>
<td>Suspected heatstroke deaths</td>
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<tr>
<td>Confirmed heatstroke deaths</td>
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Heat & Health

- Surveillance evaluation found case definition too broad to achieve reliable data and ensure acceptability
- with emerging global evidence, surveillance formats updated in 2021

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<tr>
<td>o Suspected heatstroke cases</td>
<td>• HRI morbidity, mortality incidence</td>
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<tr>
<td>o Suspected and confirmed heatstroke deaths</td>
<td></td>
</tr>
<tr>
<td>o Emergency admissions</td>
<td>• Excess admissions and mortality</td>
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<tr>
<td>o All-cause deaths</td>
<td></td>
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<tr>
<td>o Confirmed cardiovascular deaths</td>
<td></td>
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<tr>
<td>o Death investigation (social autopsy) for suspected heatstroke deaths only</td>
<td>• % classic/exertional HRI mortality</td>
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**National Acute Respiratory Illness (ARI) Surveillance**

- Initiated in 2017 in Delhi
- Sentinel surveillance
- Reporting units: tertiary care health facilities
- Priority sites: 122 non-attainment cities identified under National Clean Air Programme
- Expanded to 58 cities of 17 states

### Data collected (daily)

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<tr>
<td>o Total emergency visits</td>
<td>• % respiratory emergency visit and admissions</td>
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<tr>
<td>o Respiratory emergency visits, admissions</td>
<td>• % invasive ventilation</td>
</tr>
<tr>
<td>o Respiratory treatment delivered</td>
<td></td>
</tr>
<tr>
<td>• Nebulization</td>
<td></td>
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<tr>
<td>• Invasive/non-invasive ventilation</td>
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Upgraded soon
- To include cardiovascular and cerebrovascular emergencies
Challenges

- Complete and timely availability of surveillance data
- Ability to assess health impact of environmental factors in real-time
- Validity of suspected heatstroke cases
- Associating acute respiratory admissions with air pollution levels
- Utility limited to time and place distribution

Digitalization, integration is under progress
Programme Implementation Indicators

• % health facilities that have adopted recommended green and climate-resilient measures in a state
  • Energy audit
  • LED lights
  • Solar panels
  • Rainwater harvesting
  • Sewage, Effluent, Water, Solid waste treatment plants
  • Flood and Cyclone resilient infrastructure

• No. of states launched State Action Plan on Climate Change and Human Health

• National Health Adaptation Plans published for identified climate-sensitive illnesses
Challenges

• Resource Intensive
• Guidelines and Blueprints
• Retrofit existing structures
• Mainstreaming into policies to make it sustainable – Principles incorporated into Indian Public Health Standards 2022
• Finding innovative solutions specific to place and context