Early Warning and Preparedness

Extreme Heat in the health sector

2nd Multi-Hazard Early Warning Conference
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Joint Office for Climate and Health

Global Heat Health Information Network
THE SILENT KILLER: CLIMATE CHANGE AND THE HEALTH IMPACTS OF EXTREME HEAT

Heatwaves could become a silent killer in African cities

India Prime Minister: Heat Wave grips India – Know why Heat waves are called Silent Disaster – Current Affairs 2018

Why heatwaves are the silent killers more devastating than hurricanes
Extreme Heat is a disaster!
Heat is the leading cause of weather-related death in many places.

Weather Fatalities 2018

Source: https://www.nws.noaa.gov/om/hazstats.shtml
Extreme heat is a multi-hazard disaster

- Air Pollution
- Fires
- Power grid failures

↑ Cardiopulmonary and respiratory problems
↑ Burns, injuries, drowning
↑ Lack of air conditioning and cool spaces
↑ Failures in water and healthcare
↑ Lost livelihoods
↑ Disease transmission

Recent Fires associated with heatwaves:
- Moscow 2010
- Portugal 2017
- Sweden 2018
- California 2018
- Australia 2018 – 2019
Heat risk amplifies other disaster risks

USA – 2017

Hurricane Irma knocked out power amplifying impacts of a concurrent heat wave

Critical to break the silence
If heat is not considered a “disaster” – it is not factored into emergency management planning as it should be
Heat stress is a serious and urgent health threat for humans.

Can lead to:
- Severe dehydration
- Blood clotting
- Stroke
- Organ damage

Aggravate:
- Kidney disorders
- Mental health
- Cardiac conditions
- Pulmonary conditions

Heat stroke requires medical treatment
Case-Fatality rate of untreated heat stroke is 65–80%
The basis of preventing heat illness and death is comprehensive early warning and planning.
Heat-Health Action Plans

1. Agreement of a Lead Agency
2. **Accurate and timely heat health warning and alert systems (HHWS)**
3. Heat-related information / communications plan
4. Reduction in indoor heat exposure
5. Special care for vulnerable populations
6. Preparedness of the health and social care system
7. Long-term urban planning
8. Real-time surveillance
9. Evaluation
Success factors of heat health early warning – early action

All well-functioning action and alert systems rely on:

1. Heat risk must be understood and managed across timescales – short-term heat early warning system must be complemented by seasonal and sub-seasonal preparedness.

2. Strong cross-disciplinary and multi-agency collaboration.

3. Tailored to location, context, and population characteristics.

4. Effective communication between stakeholders including national and local governments, universities, media, healthcare and social protection systems, NGOS and humanitarian actors, as well as, affected populations.
Insights

Heat prevention must plan across multiple timescales, including future projections – not just heatwave events.

| Level 0 | Long-term planning - All year |
| Level 1 | Heatwave and Summer preparedness programme - 1 June – 15 September |
| Level 2 | Heatwave is forecast – Alert and readiness - 60% risk of heatwave in the next 2 to 3 days |
| Level 3 | Heatwave Action - temperature reached in one or more Met Office National Severe Weather Warning Service regions |
| Level 4 | Major incident – Emergency response - central government will declare a Level 4 alert in the event of severe or prolonged heatwave affecting sectors other than health |

Heat risk management is location and context specific.

To incorporate the differentiated needs of vulnerable groups, and inform appropriate and effective responses – collaboration with the research community is essential.
How prepared is the health sector for a warming future?

2017 GHHIN Survey - Global Map shows temperature anomalies in 2018 vs operational heat health action plans (n=66)

<table>
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<th>WHO Region</th>
<th>No. Countries identified to have HHAPs</th>
<th>% total</th>
<th>% Countries with HHAPs</th>
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Emerging priorities and good practice

- **Develop integrated information and response systems** – expanding timescale, impacts, and partnerships of the warning-response efforts

- **Downscale national plans** to municipal and city level

- Integrate **multi-timescale climate predictions** and projections into existing policy and planning cycles

- Improve heat-related mortality and morbidity **surveillance** and integrated information systems

- **Actionable information must be simple**, yet still scientifically correct and applicable in the health context. This cannot be achieved without sustained cross-sectoral engagement.

For more information [http://ghhin.org/press](http://ghhin.org/press)
Join the Network!
www.ghhin.org

2nd Global Heat Health Forum
July 2020 – Europe