The need for research-based evidence to support humanitarian action on heat waves

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Humanitarian action

- Even before COVID-19, millions of people were affected by disasters and humanitarian emergencies every year, with billions of dollars spent by people and organisations involved in disaster risk reduction, resilience, planning, response and recovery.
- Their aim is to do things that should lead to:
  - Better protection
  - Less death, injury and damage
  - Quicker recovery
But
But
• Doing *something* is not enough.
• It needs to do more good than harm.
• Decision makers need to know what works (and by how much and for whom), what doesn’t work, what remains unproven and what, no matter how well meaning, might be harmful.
• They need to make well informed choices and decisions.
• They need reliable evidence, from robust research.
Evidence-based decision making

• Humanitarian action to reduce the impacts of heat waves needs to be based on evidence from reliable research into:
  ➢ the size of the problem
  ➢ its causes
  ➢ who is affected
  ➢ what can be done to help them

• This research needs to be well-conducted, accessible and accumulated in systematic reviews.
Systematic reviews providing answers from existing research

- Faurie et al (2022) meta-analysis of 30 studies showed that every 1°C increase in temperature increased direct heat illness morbidity by 18% and mortality by 35%.
- Liu et al (2022) found a positive association between heat waves and adverse mental health outcomes.
- van Daalen et al (2022) found an association between heat waves and gender-based violence.
- Wu et al (2022) showed that heat waves increased the risk out-of-hospital cardiac arrest.
Systematic reviews posing questions for new research

• Arsad et al (2022) highlighted the need for research to better understand the impacts of heat waves on vulnerability, to help stakeholders develop effective plans to reduce these impacts.

• Faurie et al (2022) highlighted the need for the identification of effective preventative interventions to reduce heat-related illness during hot weather, in particular for vulnerable populations.

• Gupta et al (2012) outlined the design of a randomised trial of the effects of electric fans on serious morbidity and mortality in people aged 65 years or older in residential or care homes during a heat wave.
Improving availability of reliable evidence
Improving research

• The need for reliable research as the source of the evidence for well-informed decisions needs to be recognised.  
• Research should be an integral part of practice.  
• There should be no innovation without evaluation.  
• Researchers, would-be researchers, teachers of researchers and users of research need guidance on the most appropriate research methods.
WHO Guidance on Research Methods for Health Emergency and Disaster Risk Management

• First WHO textbook on Health EDRM research methods.
• 44 chapters offer practical advice on planning, conducting and reporting quantitative and qualitative research.
• Additional content (podcasts, slideshows and videos) being added via the WHO Knowledge Hub.
• Case studies of direct relevance to Health EDRM provide real-life examples of research methods and how they have modified policies.
Case studies

* Chapter 3.5 Cochrane review of the effects of electric fans during heat waves.
* Chapter 4.7 study forecasting the costs of heat waves in Australia and the USA.
* Chapter 4.8 health consequences of the 1995 heat wave in Chicago and the European heat wave of 2003.
* Chapter 4.15 evaluation of the heat wave plan for England.
Need for research-based evidence

- Evidence is vital to well-informed decision making in Health EDRM.
- Research that provides this evidence must be high quality, fit for purpose and integral to practice, not a luxury or an add-on.
- There should be no innovation without evaluation.
- Researchers, would-be researchers and users of research need guidance on how to do, find and use research. They can find relevant guidance at tinyurl.com/bdz4r2am and might wish to join the Health EDRM Research Network: wkc_tprn@who.int
Take-away messages

• Humanitarian action needs to be evidence based in order to do more good than harm.
• Policy makers and practitioners need access to reliable evidence to make well-informed decisions.
• Researchers, would-be researchers and users of research need guidance on how to do, find and use research.
Useful resources

Evidence Aid (www.EvidenceAid.org)
Summaries of reviews relevant to humanitarian action and Health EDRM.

Global Heat Health Information Network (ghhin.org)
Increasing awareness and capacity to better manage and adapt to the health risks of dangerously hot weather in a changing climate.

World Meteorological Organization and WHO global platform (climahealth.info)
Actionable knowledge relevant to climate and health.

WHO Knowledge Hub (extranet.who.int/kobe_centre/en/what_we_do/health-emergencies/research-methods)
WHO Guidance on Research Methods for Health Emergency and Disaster Risk Management, including chapters, podcasts, slideshows, videos and webinars.
References


