

Chapter 2.6 The current state of the evidence: Mapping the evidence and systematic reviews.

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Further reading

1. Bradt DA. Evidence-based decision-making in humanitarian assistance. Humanitarian Practice Network (HPN), ODI. 2009.

Summary of this document: This report highlights key concepts in evidence-based practices, examines recommendations from published humanitarian reviews and presents options for researchers to strengthen evidence-based decision-making in the design, implementation and evaluation of humanitarian actions.

In this report, the author provides an overview of evidence-based decision-making in technical sectors of humanitarian assistance. It describes the history and principles of evidence-based practice in health care and links these principles with their applications in humanitarian assistance. The report includes a series of evidence-based humanitarianism case studies and recommendations for Health EDRM researchers, implementing agencies and donors. The author concludes that while evidence-based practice is not always used and does not guarantee good outcomes, it can better inform and contextualize a potential humanitarian intervention.

2. House of Commons Science and Technology Committee. Scientific evidence and advice in Emergencies. 2011. Available at <https://publications.parliament.uk/pa/cm201011/cmselect/cmsctech/498/498.pdf> (accessed 22 February 2022).

Summary of this document: This report from the UK House of Commons Science and Technology Committee examines scientific advice and evidence use in emergencies.

This report reviews and critiques the UK's frameworks for risk assessment and emergency response. It provides recommendations for the UK government's formation of scientific advisory groups and transparent public communication during emergencies. The report presents four science in emergencies case studies that provide focal points and real-life examples to draw upon. These are the 2009-10 H1N1 influenza pandemic, the disruption caused by volcanic ash in April 2010, space weather and cyberattacks. The report concludes that the UK Government could better incorporate scientific evidence into emergency decision-making and clearly communicate "most probable scenarios" to the public.

3. Carbone EG, Thomas EV. Science as the Basis of Public Health Emergency Preparedness and Response Practice: The Slow but Crucial Evolution. American Journal of Public Health. 2018; 108(S5): s383-6.

Summary of this document: This article might help researchers to develop knowledge translation strategies to support evidence-informed practice during emergencies and disasters.

In this article, the authors outline the recent development of evidence-based public health emergency preparedness and response in the USA. It describes significant challenges to overcome and key factors that facilitate the implementation of evidence-based practice. The authors recommend a partnership between researchers, funding agencies and professional associations to ensure that those working in public health preparedness and response continue to develop evidence-based practice.

4. European Center for Disease Prevention and Control (ECDC). The use of evidence in decision-making during public health emergencies. 2019. Available at https://www.ecdc.europa.eu/sites/default/files/documents/use-of-evidence-in-decision-making-during-public-health-emergencies_0.pdf (accessed 22 February 2022)

Summary of this document: This technical report from the European Center for Disease Prevention and Control (ECDC) might help researchers to develop knowledge translation strategies to support evidence-informed practice during emergencies and disasters.

In this technical report, the authors present the findings from an ECDC expert workshop in December 2018 to identify and address the links between scientific evidence and decision-making in public health emergencies. It discusses common challenges to evidence-based decision-making in this setting and provides potential solutions to these challenges. The authors conclude that these solutions might help improve knowledge transfer and promote evidence use in emergencies.

5. Harden A, Thomas J, Cargo M, Harris J, Pantoja T, Flemming K, et al. Cochrane Qualitative and Implementation Methods Group guidance series-paper 5: methods for integrating qualitative and implementation evidence within intervention effectiveness reviews. *Journal of Clinical Epidemiology*. 2018; 97: 70-8.

Summary of this document: This article from the Cochrane Qualitative and Implementation Methods Group provides guidance to researchers wishing to integrate qualitative and implementation evidence when preparing a systematic review of the effects of Health EDRM interventions.

In this article, the authors provide guidance on opportunities and methods for integrating the findings from quantitative studies of the effects of intervention with those from qualitative studies and process evaluations. These integration methods include presenting findings in a matrix, analyzing program theory, using logic models, testing hypotheses from qualitative evidence synthesis and qualitative comparative analysis. These methods and tools were derived from an analysis of those that have been used in reviews to integrate qualitative and quantitative studies to better understand the effects of interventions. The methods were identified through the collective expertise of the Cochrane Group, supported by its register of 8000 articles.