

Chapter 1.2 Background: Health EDRM and research

Welcome to this podcast on chapter 1.2, entitled Background: Health Emergency and Disaster Risk Management and Research. This chapter was developed by the editors and sub-editors of the Guidance. This summary is presented by Professor Emily Chan, Director of the Collaborating Centre for Oxford University and Chinese University of Hong Kong for Disaster Medical Humanitarian Response; Professor Virginia Murray, Head of Global Disaster Risk Reduction at Public Health England; and myself, Jonathan Abrahams, from the Disaster Risk Management and Resilience Unit in the WHO Health Emergencies Program in WHO Headquarters in Geneva.

This chapter is important because it describes health emergency and disaster risk management (or Health EDRM, for short) that frames the policy, practice and the field of research covered in this Guidance. Given the many challenges and the devastating impacts of emergencies and disasters, Health EDRM aims to transform the policy, practice and culture with respect to managing risks and the consequences associated with these events. As a precursor to the research methods described in the Guidance, this chapter briefly outlines how strengthening and applying the evidence from high quality research will be critical to achieving this transformation.

Health EDRM is embodied in the WHO Health EDRM Framework and this was published in August 2019. The Framework and its accompanying Glossary of Health EDRM Terminology are key references for the users of this Guidance.

The Framework emphasizes that the combination of prevention, preparedness and readiness, together with response and recovery, is there to save lives and protect health. The Framework shows how the entire health system and the whole of society must be fundamental to these risk management measures and emphasises the needs for communities to be in the driving seat. Reducing the risks and consequences of emergencies and disasters is vital to local, national and global health security and to building the resilience of communities, countries and health systems.

The broad scope of Health EDRM involves actors from health and other sectors who must be able to access and use evidence from research to inform their decisions and actions aimed at preventing or reducing hazards, exposures and vulnerabilities, preparing for hazardous events and responding to and recovering from them. Where uncertainties remain, decision-makers and practitioners must be able to resolve these uncertainties with evidence to facilitate new research.

As Health EDRM covers all types of risks that can lead to emergencies and disasters, the Chapter contains a summary of the health, economic and social effects of these events on communities and countries around the world. Research has an important role in enabling the scientific analysis of the interactions of compounding hazards, exposures, vulnerabilities and capacities as well as the describing risk drivers, such as climate change, weak health systems

and conflicts, which are increasing the risks and impacts of emergencies on health, livelihoods, economies and the environment.

The Sendai Framework for Disaster Risk Reduction 2015-2030 emphasizes the importance of improving the scientific evidence base to advance health emergency disaster risk management. Research also features in the “triple billion” goals of WHO’s 13th General Programme of Work, that includes the aim of ensuring one billion people have better protection from health emergencies by 2023. Sound risk management is essential to safeguard the development and implementation of the sustainable development goals, including the pathway to UHC, the Sendai Framework, the International Health Regulations (or IHR), the Paris Agreement on Climate Change and other related global, regional and national frameworks.

The Framework states that the expected outcome of Health EDRM is that “countries and communities have stronger capacities and systems across health and other sectors resulting in the reduction of the health risks and consequences associated with all types of emergencies and disasters”.

Despite the fact that many countries have strengthened their capacities by implementing multi-hazard disaster risk management, the IHR (2005), climate change adaptation and health systems strengthening, many challenges and risks remain.

The Health EDRM Framework is intended to help resolve such issues by providing a common language and a comprehensive and inclusive approach that can be adapted and applied by all the actors – in health and other sectors – working together to reduce the health risks and consequences of emergencies and disasters.

The chapter describes the set of core principles and approaches for Health EDRM that seeks to transform policy and practice from a focus on events and response to one that is risk based and applies a risk management approach. Health EDRM aims to be proactive rather than reactive; communities should build capacities to manage the multiple risks by applying an all-hazards approach rather than focusing on single hazards. More attention is needed on reducing vulnerability and building capacities; and there is a need for a whole of society approach with responsibilities shared across multiple disciplines, health systems and all sectors. All actors working with communities, by applying ethical considerations and upholding human rights, is key to this transformation.

Health EDRM asserts that the needs and rights of the people with the highest risks in any community, such as the poorest, women, children, people with disabilities, older persons, migrants, refugees and displaced persons, and people with chronic diseases and other underlying health conditions, must be at the centre of efforts.

The Health EDRM Framework organises around 200 functions required to manage risks under 10 components that address policies, planning and coordination, human and financial resources, health infrastructure, health services and community capacities. The role of research

is recognised specifically in the two components on information and knowledge management and also in monitoring and evaluation, both of which require good quality research, evidence-based guidance and training programs supported by health systems improvements.

The WHO Thematic Platform for Health EDRM Research Network was started in 2018 to promote global collaboration among academics, government officials and other stakeholders so as to generate better scientific evidence to inform policy and practice for Health EDRM. Leaders in this emerging research network published review papers on the Sendai Framework implementation and recommendations on Health EDRM research. These highlighted the critical importance of conducting research before, during and after emergencies and disasters, and not only in the acute phase.

With many thanks to the WHO Kobe Centre for Health Development, they organized a meeting in October 2018 to identify key research gaps and questions, bringing together experts from WHO, the World Association for Disaster and Emergency Medicine (or WADEM), Japan International Cooperation Agency (known as JICA), and delegates to the Asia Pacific Conference on Disaster Medicine. One of the outcomes of that meeting was recognition of the need to produce this guidance on research methods for those who need to use research, and those who might be responsible for commissioning or conducting research in the future.

A word now on WHO and research. This Guidance helps to fulfil WHO's roles as a knowledge-based, normative and standard-setting organization which supports and uses evidence, research and innovation. WHO works with partners from many disciplines, hosts special research programmes, coordinates multi-country research, and supports research capacity development, such as those needed to better detect, prevent and respond to new and emerging diseases and other hazards that endanger health. It also benefits from over 800 WHO collaborating centres, which are institutions designated by the Director-General to carry out activities in support of WHO's international programme of work. Evidence from research also forms a foundation for WHO and global strategic shifts in health – in conjunction with diplomacy and advocacy, with normative guidance and agreements being based on the best science and evidence.

People and practitioners working in Health EDRM must face many topics that have limited existing knowledge and have to work or operate amidst uncertainties.

These uncertainties may arise from the limitations of updated knowledge, a lack of understanding of the subject area or how common the current problems are, failure to access the science and evidence, or simply the inability to apply existing evidence to support urgent decision and policy making.

Evidence supported by good quality research is vital to resolving these uncertainties. Uncertainties that may be addressed through conducting research to ensure evidence findings so as to reduce the risk of manifestation of those problems and to minimise adverse impact as

and when they do occur. Without evidence to support their decision making, decision makers may face the challenges of doing more harm than good in their choices and actions.

Research has substantial impact on decision making that may affect the health and well-being of individuals and populations. It influences the implementation of potentially effective interventions or the avoidance of ineffective ones. For instance, systematic review based research has identified the benefits of vaccination to prevent common diseases, strategies to improve water quality, disease treatment and prevention and the potential harms of interventions such as the practice of single episode debriefing for the intention to prevent post-traumatic stress disorder (PTSD).

Research might be conducted by the types of studies and activities described in the book chapters. For example, research might have been done and results synthesised through systematic reviews and guidelines as highlighted in chapter 2.7. Technical guidelines should be underpinned by systematic reviews of existing research evidence as highlighted in chapter 2.6 and might draw on the output of international organizations such as Cochrane, the Campbell Collaboration and the Joanna Briggs Institute that are dedicated to the production and maintenance of these reviews, or organizations, such as Evidence Aid, that collate systematic reviews to produce collections on specific topics, such as malnutrition, as highlighted in chapter 3.7.

When decision makers and practitioners faced with a lack of research evidence or have limited confidence in information quality or relevance of research output that may support their decisions or actions may have to work with researchers.

This book provides an overview to understand the research processes that might be relevant to Health EDRM. It hopes to serve as guidance on the research process by outlining the research management processes that will lead to effective and efficient research studies; the value of a systematic approach to designing, conducting, analysing reporting and the application of research results; how to ensure that research is reliable, robust and fit for purpose, and perhaps most important of all meets the priority needs of those who will use it; and how to implement a research plan and what are the key aspects to translate study findings into routine, day-to-day practice, policy and programme direction setting.