

Chapter 6.1

Health EDRM Research in the Context of COVID-19

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Learning objectives

- To understand the impacts of COVID-19 and other concurrent emergencies for health emergency and disaster risk management (Health EDRM), and key challenges and lessons for Health EDRM research in the context of COVID-19.
- To signpost researchers to other chapters in this guidance, to help them to plan, conduct and communicate Health EDRM research in the context of COVID-19 and concurrent risks from all hazards, including epidemics and future pandemics.
- To share case studies of Health EDRM research in the context of COVID-19.

Introduction (1)

- COVID-19 has had drastic economic and social impacts globally.
- The pandemic exposed the inequalities and inadequate level of preparedness in health systems around the world.
- Challenges included people's lack of awareness, uncoordinated actions of different sectors and unprepared health facilities.
- The impact of the pandemic will most likely increase poverty and inequalities on a global scale.
- Many countries battled COVID-19 with concurrent emergencies from other hazards.



Introduction (2)

- A whole-of-society approach is needed to manage COVID-19.
- Misinformation about COVID-19 is widespread and the WHO launched a program to prevent and overcome the harm of misinformation.
- The pandemic accelerated collaboration for the innovation and learning needed to develop response strategies in record time.
- It also accelerated global collaborations such as the **Global Research Collaboration for Infectious Diseases Preparedness (GLOPID-R)**, who worked with WHO to **identify research priorities needed to respond to COVID-19** and supported projects for rapid funding.

Research into COVID-19

The spread of COVID-19 caused a rapid rush to conduct research about the disease. Principles from the WHO Guidance can be used for **planning, conducting and reporting** new research on COVID-19. **This is important for ensuring that the research:**

- Addresses areas of uncertainty or evidence gaps.
- Is relevant, carefully planned and clearly reported.
- Covers prevention, preparedness, response and recovery from the pandemic.
- Answers questions being asked by governments and communities.

Designing appropriate research studies (1)

- Choosing a research question and designing a study depends on the uncertainty that needs to be better understood through new research (see Chapter 3.5).
- It is important to know what type of evidence is needed and how it might be used in policy and practice.
- Investigating the underlying epidemiology is the first step.
- It is important to consider the impact of each wave of the pandemic and people's response to public health measures. This requires:
 - Researching specific impacts and broader consequences of the pandemic.
 - Researching measures used to control the disease.
 - Having good quality data, which may need to use routine data collected by health systems.

Designing appropriate research studies (1)

- Other important areas for COVID-19-related research are:
 - Identification of effective interventions for the prevention, diagnosis and treatment of the disease.
 - Documenting the various aspects of the COVID-19 pandemic to inform the response to future pandemics.
 - Identifying ways to quickly assemble multidisciplinary international collaborations for planning and conducting research.



Identifying existing research into COVID-19

- When planning new research, it is important to identify relevant existing studies to avoid duplication or waste.
- From early 2020 onwards, many projects were launched to track COVID-19 studies, including:
 - WHO COVID-19 Research Database.
 - Living overview of evidence (L·OVE) Platform.
 - Cochrane COVID-19 Study Register.
 - GLOPID-R and UKCDR Research Tracker.

Systematic reviews and COVID-19

- Systematic reviews are used to identify, appraise and synthesize existing relevant research studies to ensure that the new research is justified and for placing it in context (see Chapter 2.6).
- A large number of COVID-19 systematic reviews have been done.
- These reviews can be found in repositories such as:
 - COVID-END
 - PROSPERO
 - PubMed
- Evidence Aid created a special collection of summaries of COVID-19 systematic reviews, to make it easier for decision-makers to access these.

Case study 1: Evidence Syntheses and COVID-19 (1)

- The **Evidence Collaborative on COVID-19 Network (ECC-19)** is a self-organizing network of experts and organizations who meet to discuss evidence retrieval to manage the risks of the COVID-19 pandemic.
- ECC-19 is coordinated by the Department of Quality Assurance of Norms and Standards within the Science Division of WHO.
- **Partners include:**
 - WHO staff from offices around the world
 - Cochrane
 - COVID-END
 - Evidence Aid

Case study 1: Evidence Syntheses and Covid-19 (2)

- In March 2020, Evidence Aid began building a collection of summaries of systematic reviews relevant to COVID-19.
- Summaries include:
 - Details of the review and links to its full text.
 - Background information on the topic.
 - Effects of the evaluated interventions (if applicable) or other findings of the review.
- Combined summaries were prepared if there is more than one review of the same topic.
- By June 2021 the Evidence Aid collection contained 500 summaries, covering 800 systematic reviews.

Prioritizing new research

- When planning new research, it is important to review existing research to ensure that the research will address an area of ongoing uncertainty, and not overlap with any existing studies.
- New research should be prioritized, and it should be done on priority topic areas that will contribute useful evidence beyond what is already available (see Chapter 2.7).
- Systematic reviews should not unnecessarily duplicate the same research.

Determining the scope of Health EDRM research in the context of COVID-19 (1)

The **WHO Thematic Platform for Health EDRM Research Network (Health EDRM RN)**:

- Was developed in 2018 to strengthen the scientific evidence base for Health EDRM.
- As of 2022, involved more than 200 global experts from all WHO Regions.
- Identified the following key areas for future research:
 - Synthesis of evidence to develop strategies/recommendations on preparedness and response for concurrent emergencies in the context of COVID-19
 - Recovery of health systems
 - Risk literacy and community acceptance of risk assessment and adherence to nonpharmaceutical public health interventions
 - Health workforce development in the context of COVID-19

Determining the scope of Health EDRM research in the context of COVID-19 (2)

Using these findings, the WHO called for research that:

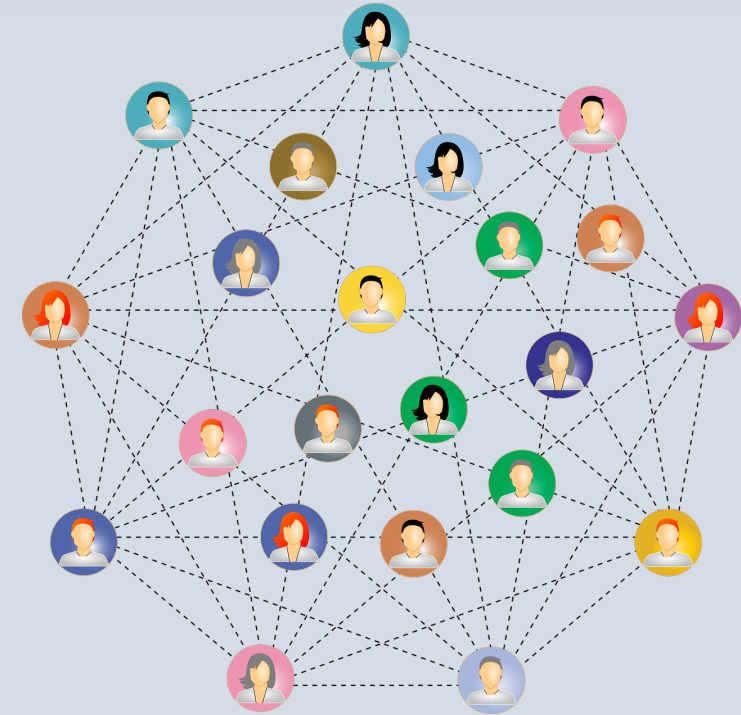
- Increases the likelihood of implementing an all-hazards Health EDRM approach for the risks related to emergencies occurring during pandemics.
- Strengthens governance mechanisms and enables a whole-of-society approach to manage COVID-19 risks and other health emergencies.
- Strengthens community resilience before, during and after the COVID-19 pandemic.
- Focuses on building back better from the pandemic and related damage to population health.

Adaptations to new and ongoing research on Health EDRM in the context of COVID-19

- Operational procedures and the conduct of Health EDRM research were impacted in many ways by COVID-19.
- Many staff were re-deployed from other research to COVID-19 studies.
- Physical distancing led to more desktop research projects (such as systematic reviews and case study analysis).
- Pandemic restrictions led to an increase in the use of online methods in research projects.
- Qualitative data gathering switched from face-to-face to online, which presented challenges for studies in low- and middle-income countries.
- Pandemic-related disruptions have created many issues for future Health EDRM research because of how society transformed during the pandemic.

Communicating research about Health EDRM during the COVID-19 pandemic

- The COVID-19 pandemic increased the need to communicate research findings quickly and widely.
- Knowledge must be transferred into policy and practice faster.
- The COVID-19 pandemic led to the accelerated synthesis of knowledge (e.g., via systematic reviews) and its incorporation into relevant policies.
- Many studies were first published as preprints, which are not peer-reviewed, bring them to stakeholders sooner.



Conclusions

- The COVID-19 pandemic exposed and intensified global inequalities.
- The pandemic impacted health, education, economies and society as a whole.
- Research should be used to learn lessons to inform management of future pandemics.
- Research is also needed to study the waves of the pandemic, how different countries managed them and other uncertainties in the context of COVID-19.
- Research findings must be clearly available and accessible in order to inform Health EDRM policy and practice.

Key messages (1)

- The COVID-19 pandemic has been unprecedented in many ways.
- Tens of thousands of research studies and thousands of systematic reviews have been done, leading to an overwhelming amount of research and a vast amount of evidence for decision-makers and practitioners to navigate during the management of the COVID-19 pandemic.
- There has also been a considerable impact on how research into aspects of Health EDRM is designed, conducted, reported and used in managing other emergencies and disasters, including concurrent ones during the pandemic.

Key messages (2)

- Future research in Health EDRM needs to learn from lessons identified during the COVID-19 pandemic to ensure that research is prioritized appropriately, coordinated well and reported clearly if it is to provide the evidence needed by decision-makers managing the risks, including planning for and responding to ongoing and future emergencies and disasters, such as disease outbreaks, epidemics and pandemics.
- Greater engagement in Health EDRM research will be key to providing evidence from health and non-health sectors that can inform relevant policies and practices for managing current and future risks from all emergencies and disasters that communities and countries are exposed to.

Further readings

World Health Organization. A Coordinated Global Research Map: 2019 Novel Coronavirus. WHO: Geneva March 2020. Available at https://www.who.int/blueprint/priority-diseases/key-action/Coronavirus_Roadmap_V9.pdf

Independent Panel for Pandemic Preparedness and Response. COVID-19: make it the last pandemic. Available at https://theindependentpanel.org/wp-content/uploads/2021/05/COVID-19-Make-it-the-Last-Pandemic_final.pdf

World Health Organization. From Worlds Apart to a World Prepared: Global Preparedness Monitoring Board report 2021. Available at <https://www.gpmb.org/annual-reports/annual-report-2021>

References

This chapter: Huda Q, Clarke M, Murray V, Chan EYY, Wong CS, Rakesh A, Kayano R. Chapter 6.1: Health EDRM research in the context of COVID-19

Global Research Collaboration for Infectious Disease Preparedness: <https://www.glopid-r.org/our-work/novel-coronavirus-covid-19/>

WHO COVID-19 research database: <https://search.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov>

L·OVE platform: <https://app.iloveevidence.com/loves/5e6fdb9669c00e4ac072701d>

Cochrane COVID-19 study register: <https://covid-19.cochrane.org>

COVID-END: <https://www.mcmasterforum.org/networks/covid-end>

PROSPERO: <https://www.crd.york.ac.uk/prospéro>

Coordinated Global Research Map: 2019 Novel Coronavirus: https://www.who.int/blueprint/priority-diseases/key-action/Coronavirus_Roadmap_V9.pdf.

Evidence Aid COVID-19 collection: <https://evidenceaid.org/evidence/coronavirus-covid-19>

ECC-19: <https://sites.google.com/view/ecc19/resources>

Health EDRM Research Network: https://extranet.who.int/kobe_centre/en/what_we_do/health-edrm-rn

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