Joint webinar on research capacity building for Health Emergency and Disaster Risk Management (Health EDRM)
Session 1 - Expert presentations: key knowledge to plan, conduct and report research project before, during and after emergencies and disasters

Research in the context of COVID-19

Professor Virginia Murray
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Chair of the TWG for UNDRR / ISC for Hazard Definition and Classification Review technical report and the Hazard Information Profiles
Member of the WHO Collaborating Centre on Global Health Security
Member of CODATA international Science Council Executive Committee
Member of Integrated Research on Disaster Risk (IRDR) Scientific Committee
Co-Chair of IRDR Disaster Loss Data (DATA)
Globally, as of 12:14pm CEST, 12 July 2023, there have been 767,972,961 confirmed cases of COVID-19, including 6,950,655 deaths, reported to WHO. As of 9 July 2023, a total of 13,462,024,421 vaccine doses have been administered.
Timeline: WHO's COVID-19 response

Click on the action circles below the chart to find out more.

Cases key: Western Pacific, South-East Asia, Americas, Europe, Eastern Mediterranean, Africa

### 200,000 daily cases

**ADVICE**

10-12 Jan 2020

WHO published a comprehensive package of guidance documents for countries, covering topics related to the management of an outbreak of a new disease:

- Infection prevention and control
- Laboratory testing
- National capacities...

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**LEADERSHIP**

30 Jan 2020

The Director-General declared the novel coronavirus outbreak a public health emergency of international concern (PHEIC), WHO’s highest level of alarm.

The WHO Director-General reconvened the IHR...

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**SCIENCE**

11-12 Feb 2020

WHO convened a Global Research and Innovation Forum on the novel coronavirus, attended in person by more than 300 experts and funders from 46 countries, with a further 150 joining online. Participants came together to assess the level...

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- News Release
- R&D Blueprint

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A COORDINATED GLOBAL RESEARCH ROADMAP: 2019 NOVEL CORONAVIRUS
MARCH 2020

There is broad consensus on the need for research to focus on actions that can save lives now; facilitate actions so that those affected are promptly diagnosed and receive optimal care; and catalyse the full integration of all innovations within each research area.

Moreover, there is an imperative to support research priorities in a way that leads to the development of sustainable global research platforms prepared for the next disease X epidemic. This will allow for accelerated research, innovative solutions and (R&D) of diagnostics, therapeutics and vaccines, as well as the timely and equitable access to these life-saving tools for those at highest risk.

https://www.who.int/blueprint/priority-diseases/key-action/Coronavirus_Roadmap_V9.pdf?ua=1
WHO Guidance on Research Methods for Health and Disaster Risk Management

Implementation:
From 2018 to 2022

Implementing partners:
Editors: Ryoma Kayano (WHO WKC), Virginia Murray (Public Health England), Mike Clarke (Queens University Belfast), Emily Y.Y. Chan (The Chinese University of Hong Kong)

Associate editors: Tracey O'Sullivan (University of Ottawa), Jonathan Abrahams (WHO WHE)

Authors and peer reviewers: 164 authors from 30 countries, WHO Headquarters and Regional Offices (PAHO, AFRO, EMRO, EURO, SEARO, WPRO)

Location of research:
Global

Total Budget: US$ 200,000

https://extranet.who.int/kobe_centre/en/project-details/GUIDANCE_ResearchMethods_HealthEDRM
Chapter 6.1 Health EDRM research in the context of COVID-19

Authors: Qudsia Huda, Mike Clarke, Virginia Murray, Emily Y.Y. Chan, Chi Shing Wong, Ankur Rakesh, and Ryoma Kayano

Chapter 6.1 describes the impacts of the COVID-19 pandemic and other concurrent emergencies on health emergency and disaster risk management (Health EDRM) research.

What is this chapter about?
The COVID-19 pandemic has taken a drastic human toll, and the economic and social impacts of the pandemic continue to reverberate globally. There was a rapid rush to conduct research into the virus and the illness and considerable impact on the design, conduct, reporting and use of research into aspects of Health EDRM for managing other emergencies and disasters, including concurrent ones during the pandemic.

This chapter will help researchers using other chapters in this book 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. It outlines key challenges and lessons for Health EDRM research and includes five case studies of Health EDRM research in the context of COVID-19.

Case studies presented in the chapter
1. Epidemiology management: WHO’s special program to address false or misleading information in digital and physical environments during the pandemic
2. Establishing an international and multidisciplinary research team to investigate risk information and negative psychological and behavioral consequences during
3. Evidence syntheses and COVID-19
4. WHO Global Priorities for COVID-19 Research
5. Strategic risk assessment in Bangladesh

What are the key messages of this chapter?
- The COVID-19 pandemic has been unprecedented in many ways.
- In the first 16 months of the pandemic, tens of thousands of research studies, and thousands of systematic reviews were initiated, leading to an overwhelming volume of research and a vast amount of evidence for decision-makers and practitioners to navigate through 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 similar types of emergencies and disasters, including concurrent ones during the pandemic.
- Future research in Health EDRM needs to learn from the 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, including disease outbreaks, epidemics and pandemics.
- Greater engagement in Health EDRM research will be key to provide evidence from health and non-health sectors that can inform all relevant policy and practice for managing current and future risks from all emergencies and disasters that communities and countries are exposed to.
6.1 Health EDRM research in the context of COVID-19

6.1.1 Learning objectives

1. 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.

2. To signpost researchers to other chapters in this book, 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.

3. To share case studies of Health EDRM research in the context of COVID-19.

Authors


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Case Study 6.1.2 Establishing an international and multidisciplinary research team to investigate risk information and negative psychological and behavioural consequences during the COVID-19 pandemic

Prepared by Mélissa Généreux (Department of Community Health Sciences, Faculté de médecine et des sciences de la santé, Université de Sherbrooke, Sherbrooke, Canada; and Centre intégré universitaire de santé et de services sociaux de l'Estrie - Centre hospitalier universitaire de Sherbrooke, Sherbrooke, Canada) and Elsa Landaverde (Department of Community Health Sciences, Faculté de médecine et des sciences de la santé, Université de Sherbrooke, Sherbrooke, Canada).
One Virus, Four Continents, Eight Countries: An Interdisciplinary and International Study on the Psychosocial Impacts of the COVID-19 Pandemic among Adults

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Abstract
Background: The COVID-19 pandemic and countries’ response measures have led to a significantly negative mental health impact. This mental health burden has also been fuelled by an infodemic: an information overload that includes misinformation and disinformation. Suicide, the worst mental health outcome, is a serious public health problem that can be prevented with timely, evidence-based, and often low-cost interventions. Suicide ideation, one important risk factor for suicide, is thus important to measure and monitor, as are the factors that may impact it.

Objective: This investigation had 2 primary aims: (1) to estimate and compare country-specific prevalence of suicide ideation at 2 different time points, overall and by gender and age groups, and (2) to investigate the influence of sociodemographic and infodemic variables on suicide ideation.

Methods: A repeated, online, 8-country (Canada, the United States, England, Switzerland, Belgium, Hong Kong, Philippines, and New Zealand) cross-sectional study was undertaken with adults aged 18 years, with measurement waves 1 conducted from May 29, 2020 to June 12, 2020 and measurement wave 2 conducted November 6-18, 2021. Self-reported suicide ideation was derived from item 9 of the Patient Health Questionnaire-9 (PHQ-9). Agrostandardised suicide ideation rates were reported. A binomial regression model was used to estimate suicide ideation reduction rates for each country and measurement wave, and logistic regression models were then employed to relate sociodemographic, pandemic, and infodemic variables to suicide ideation. Base rates for suicide ideation for each country were calculated as the weighted average of observed suicide ideation rates from waves 1 and 2, respectively, a difference that was significant (P < 0.001). Considerable variability was observed in suicide ideation age-standardized rates between countries, ranging from 15.0% in Belgium (wave 1) to 42.9% in Hong Kong (wave 2). Frequency social media usage...
Figure 1. Age-standardized rates and associated 95% CIs of suicide ideation by country for measurement waves 1 (surveyed between May 29, 2020 and June 12, 2020) and 2 (surveyed November 6-18, 2020).
Figure 1. Age-standardized rates and associated 95% CIs of suicide ideation by country for measurement waves 1 (surveyed between May 29, 2020 and June 12, 2020) and 2 (surveyed November 6-18, 2020).

Figure 2. Estimated proportion of participants self-reporting suicide ideation by country and measurement waves 1 and 2 stratified by age group, derived from the binomial regression model including age group, gender, country, measurement wave, and the measurement wave * age group, country * age group, country * gender, and age group * gender interactions. Females are denoted by red, males by blue, measurement wave 1 with hollow circles, and measurement wave 2 with solid circles. BEL: Belgium; CAN: Canada; ENG: England; HK: Hong Kong; NZ: New Zealand; PHL: Philippines; SWI: Switzerland; USA: United States.
The two main aims of the roadmap are:

- **Establishing a clear case definition**, then ensuring that those displaying agreed symptoms of COVID-19 are promptly diagnosed and receive optimal care, while **integrating innovation fully** within each research thematic area; and

- **Supporting research priorities in a way that leads to the development of global research platforms** **pre-prepared for the next epidemic** and thereby allowing for accelerated research and development for diagnostics, therapeutics and vaccines and timely access to those shown to be effective.

COVID-19 social science research agenda aims to:

- generate high-quality social science evidence for achieving the goals of national strategic public health response plans;

- develop and employ strong methodologies, and theoretical frameworks to tackle current epidemic challenges; and

- **understand un-intended consequences of epidemic-control decisions.**
The Evidence Collaborative on COVID-19 Network (ECC-19) is a consortium of experts and organizations who meet every one or two months to discuss progress and initiatives around evidence retrieval to manage the risks of COVID-19 pandemic. They focus on support for evidence-based policies, interventions and initiatives.
6.1 Health EDRM research in the context of COVID-19 - key messages

• The COVID-19 pandemic has been unprecedented in many ways.

• Overwhelming volume of research and a vast amount of evidence for decision makers and practitioners to navigate through during the management of the COVID-19 pandemic.

• Considerable impact on how research into aspects of Health EDRM

• Health EDRM research is prioritized appropriately, coordinated well and reported clearly

• Greater engagement in Health EDRM research will be key to provide evidence from health and non-health sectors that can inform all relevant policy and practice for managing current and future risks from all emergencies and disasters that communities and countries are exposed to.
UNDRR / ISC Hazard Information Profiles

HAZARD DEFINITION & CLASSIFICATION REVIEW

HAZARD INFORMATION PROFILES
The WHO Guidance on Research Methods for Health Emergency and Disaster Risk Management, revised 2022


Full Guidance: DOWNLOAD
Abbreviations & Glossary: DOWNLOAD

Author Biographies: Coming Soon
Editors & Contributors: DOWNLOAD
Acknowledgements: DOWNLOAD

Materials for Knowledge Hub on Research Methods on Health EDRM

(Developed in partnership with Evidence Aid)

How to use these knowledge materials?

- The Global Dissemination Initiative for The WHO Guidance on Research Methods for Health Emergency and Disaster Risk Management has been implemented to promote active implementation of the Guidance in various occasions across the globe with the support of key participants in the Health EDRM Research Network.
Research in the context of COVID-19