WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Network

First Core Group Meeting

Building a WHO Health EDRM Research Agenda

17-18 October 2019

Awaji Yumebutai International Conference Center, Hyogo, Japan

WHO Centre for Health Development (WHO Kobe Centre – WKC)

WHO Disaster Risk Management and Resilience Unit, Health Security Preparedness Department

World Health Organization
Centre for Health Development

Table of Contents

Executive Summary

The WHO Centre for Health Development (WHO Kobe Centre: WKC) convened the first core group meeting of the WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Network (TPRN) on 17-18 October 2019 in Kobe, Japan. The meeting was a key milestone in advancing the field of health emergency and disaster risk management (Health EDRM) through research. The aim of the meeting was to discuss the broader health EDRM research agenda and to agree upon a process to finalize and update the WHO Health EDRM Global Research Agenda (referred to as Research Agenda). Twenty-two participants attended the meeting, including WHO HQ Focal Points from WKC and WHO Health Emergency Programme (WHE), WHO Regional Office for Africa (AFRO), WHO Regional Office for the Eastern Mediterranean (EMRO), WHO Regional Office for Europe (EURO), Pan American Health Organization (PAHO), the co-chairs of the TPRN, and other key stakeholders in Health EDRM research, policy, and practice. The process to build the Health EDRM global research agenda was guided by WHO guidance on establishing research agendas, and the ongoing work of the TPRN in establishing a research agenda for Health EDRM.

This first meeting of the core group reviewed the results of 2018 Kobe Expert Meeting on key research questions of Health EDRM and consulted the experts on further recommendations for the research themes, key stakeholders, and operation of TPRN for effective contribution to systematic improvement of scientific evidence through global collaboration.

At the end of the meeting, the participants agreed upon a process for developing the WHO Health EDRM research agenda, including key milestones. It was recognized that this process should take account existing WHO and global research activities, and should be framed within the wider global Health EDRM research strategy, activities and priorities. Key steps in the process of developing the WHO Health EDRM research agenda include:

a) Gather information on existing Health EDRM research programmes and agendas.
b) Finalize criteria for prioritizing research themes and questions.
c) Finalize a list of stakeholders to be consulted.
d) Conduct surveys and other consultative methods with key stakeholders to identify research needs
e) Establish a process and working groups for reviewing results of the surveys.
f) Draft a research agenda to address identified needs under each theme (preliminary research areas to be referred to section 4)
g) Conduct a peer-review through global consultation
h) Publish and disseminate the finalized research agenda
i) Monitoring the progress and update the research agenda every two years.

Background

In WHO's 13th General Programme of Work 2019-23 (GPW13), WHO Member States approved the priorities and targets of WHO and defined an impact framework to monitor progress and achievements.[1] The GPW13 is structured around three strategic priorities to ensure healthy lives and well-being for all ages: achieving universal health coverage, addressing health emergencies and promoting healthier populations. The strengthening of health systems and the implementation of all three priorities together is fundamental to reducing the health risks and consequences of emergencies and to building community and country resilience and health security. In terms of health emergencies, WHO's strategic priorities are to build and sustain resilient national, regional and global capacities required to keep the world safe from epidemics and other health emergencies and to ensure that populations affected by acute and protracted emergencies have rapid access to essential life-saving health services including health promotion and disease prevention. In doing so, WHO aims for one billion more people to be better protected from health emergencies. The three specific outcomes that WHO will monitor for impact are:

- Outcome 2.1. Countries prepared for health emergencies
- Outcome 2.2. Epidemics and pandemics prevented
- Outcome 2.3. Health emergencies rapidly detected and responded to.

Each of these outcomes contains outputs which are relevant to Health EDRM research. Specifically, Output 2.2.1 "Capacities for emergency preparedness strengthened in all countries":

Goal: countries have developed, strengthened and maintained national capacities to prevent, detect, prepare for, respond to and recover from the health risks and consequences of all types of emergencies and disasters for community and country health resilience, health security, universal health coverage and sustainable development

Objectives include: use evidence from assessments, evaluations and research for proactive prevention, preparedness, capacity development and advocacy, ensuring more effective and efficient investment in emergency preparedness.

Output 2.2.1 refers to "research agendas, predictive models and innovative tools, products and interventions available for high-threat health hazards"

In May 2019, WHO launched the Health Emergency and Disaster Risk Management (EDRM) Framework,[2] which guides Member States and partners on the many functions, including evidence and research, which are required to manage the risks of all types of emergencies. The Health EDRM Framework also aims to promote coherence for the implementation of the health aspects of the Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework),

---

[1] WHO GPW13: https://apps.who.int/iris/bitstream/handle/10665/324775/WHO-PRP-18.1-eng.pdf

[2] WHO Health EDRM Framework 2019: https://www.who.int/hac/techguidance/preparedness/health-emergency-and-disaster-risk-management-framework-eng.pdf?ua=1

Sustainable Development Goals, International Health Regulations, Paris Agreement on Climate Change and other related global, regional and national frameworks.[3]

Finally, it is critical to underline research and innovation as integral parts of the GPW13. The GPW13 strategic priorities are supported by three strategic shifts, one of which consists of focusing WHO's global public health goods on greater health impact. This strategic shift is enabled by a stronger focus on WHO's normative activity, data activity, and research and innovation activities that drive the creation of global public health goods.[1]

2. TPRN: Description

Role of the WHO Thematic Platform Health EDRM Research Network

The WHO Thematic Platform on Health ERDM was launched by WHO and UNISDR in 2009 as an international, multi-agency platform to advocate, share information and catalyze action for Health EDRM.[4]

The Sendai Framework for Disaster Risk Reduction 2015-2030[3] which is the resulting document of the 2015 Third UN World Conference on Disaster Risk Reduction (WCDRR), describes priorities of action to "prevent new and reduce existing disaster risk … and increase preparedness for response and recovery, and thus strengthen resilience." With more than 30 references to health issues specifically including its goal of "the substantial reduction of disaster risk and losses in lives, livelihoods and health ….". The Sendai Framework also emphasizes the importance of improving scientific evidence to advance disaster risk reduction.

In response, in 2018, WHO established the WHO Thematic Platform for Health EDRM Research Network (TPRN) as a subgroup of the Thematic Platform to promote global collaboration among academia, government officials and other stakeholders to generate better scientific evidence to inform policy and practice for managing health risks associated with emergencies and disasters.[5]

3. Objective: Building the research agenda

The objective of the meeting was to discuss the process and concrete steps in building and gaining consensus on a global research agenda for Health EDRM. The development

---

[3] Sendai Framework for Disaster Risk Reduction 2015-2030:
https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdfSustainable Development Goals
https://sustainabledevelopment.un.org/?menu=1300
The Paris Agreement: https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

[4] Terms of Reference of Thematic Platform 2009: https://www.who.int/hac/techguidance/preparedness/WHO-Thematic-Platform-Health EDRM-Terms-Reference-2018.pdf?ua=1
[5] Terms of Reference of TPRN 2018: https://www.who.int/hac/techguidance/preparedness/WHO-Thematic-Platform-Health EDRM-Research-Network-2018.pdf?ua=1

of the research agenda will also need be integrated into the TPRN operation plan, supported by partnerships and funding.

4. Research themes

4.1. Key research themes identified at the 2018 Kobe Expert Meeting

In 2017, a review paper on the implementation of the Sendai Framework and recommendations on Health EDRM research was published[6,7]. The paper highlighted the critical importance of research before, during and after disasters (not only the acute phase) and identified research needs which were informed by the following considerations related to Health EDRM research: a holistic approach, including physical, mental and psychosocial health and well-being; identifying populations at risk with specific health needs; the standardization of needs assessments and of evaluation methodologies and reporting systems for countries, communities and individual cases; multidisciplinary and multi-sectoral approaches; and a review of research to inform better policy development and implementation.

To accelerate research on Health EDRM, WHO organized a meeting to identify key research gaps and questions by convening leading experts from WHO, the World Association for Disaster and Emergency Medicine (WADEM), and the Japan International Cooperation Agency (JICA), and delegates at the Asia Pacific Conference on Disaster Medicine (APCDM). The WHO Kobe Center (WKC) organized the meeting as one of the programs of APCDM 2018 on 17 October 2018 in Kobe, Japan. The meeting identified research questions in five major areas for Health EDRM as shown in Table 1.[8]

Table 1: Key research questions in five major areas

Area	Research Questions
Area 1 Health data management before, during and after emergencies and disasters	(a) What are the national and regional challenges inhibiting implementation of the WHO standardized medical data collection systems after emergencies and disasters? (b) What is the broader health-related data needed to inform effective Health EDRM, i.e., community vulnerabilities, hospital functional status, infrastructure, lifelines and health workforce?
Area 2	(a) How can mental health and psychosocial risk be classified using longitudinal and multi-centric studies?

---

[6] Chan, E.Y.Y.; Murray, V. What are the health research needs for the Sendai Framework. Lancet 2017, 390, e35–e36

[7] Lo, S.T.T. et.al. Health Emergency and Disaster Risk Management (Health EDRM): Developing the Research Field within the Sendai Framework Paradigm. Int. J. Disaster Risk Sci. 2017, 8, 145–149

[8] Kayano, R.; Chan, E.Y.; Murray, V.; Abrahams, J.; Barber, S.L. WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Network (TPRN): Report of the Kobe Expert Meeting. Int. J. Environ. Res. Public Health 2019, 16, 1232.

Psychosocial management before, during and after emergencies and disasters	(b) How can methods for screening, diagnosis and treatment for affected people be standardized across different settings? (c) How can assets associated with greater community resilience be identified before, during and after disasters?
Area 3 Community disaster risk management, including risk literacy and addressing the needs of sub-populations	(a) What architecture is needed to support research in Health EDRM including consensus among disciplines and ethics? (b) How can research be better translated to policy and practice across different backgrounds and contexts? (c) What kind of technology for communication is needed for risk communication, emergency response and research design?
Area 4 Health workforce development for Health EDRM	(a) How can different countries strengthen Health EDRM through disaster risk management training programs, and what strategies will support retention, motivation and deployment of the trained people? (b) What are the best practices for sustaining the development of the local health workforce for Health EDRM to foster positive interactions between external support workers and the local workforce and to enable the transition to recovery and post-event Health EDRM? (c) What is the common knowledge or competencies required for Health EDRM?
Area 5 Research methods and ethics	(a) What are the definitions of the research methods and technical terms for Health EDRM? (b) How can impact evaluation methods for intervention and qualitative–quantitative mixed methods be standardized? (c) How can the publication process for Health EDRM research become more systematic and effective? (d) What are the challenges and best practices in addressing national health systems and cultural and religious issues before, during and after interventions?

4.2. Additional research questions and research priorities

Based on this previous background, the 2019 meeting discussed further research priority areas to cover the comprehensive needs for Health EDRM research. The discussion reinforced the need to take all-hazard approach to natural hazards, disease outbreaks, technological hazards and societal hazards (e.g. conflicts and refugees) for different country contexts, as proposed by WHO Regional Offices. Participants also proposed additional questions for the five research areas above and potential additional research areas (Table 2). Additional questions to the existing areas focused on more concrete needs in terms of practice and operations. It was proposed that the development of the research agenda requires a rigorous process with stakeholders to identify research priorities and questions. The Health EDRM global research agenda would also need to take account of other research agenda and activities in health and other sectors, in order to fill gaps, add value and avoid duplication.

Table 2: Suggested update of key research areas and questions

Research Areas	Proposed additional questions for existing areas (1 – 5) Rationale for newly proposed research areas (6 – 8)
1. Health data management before, during and after emergencies and disasters	a. How can data on non-death health outcomes be captured? b. How can data be captured on NCDs in emergencies? c. How can data on long-term physical health and well-being and mortality risks be captured? d. How can data be more effectively used in health emergency risk profiling? e. How can data to be used to conduct monitoring and evaluation more effectively? f. How can big data be used for improvements to policy and practice of Health EDRM?
2. Psychosocial management before, during and after emergencies and disasters	a. How can common or standardized countermeasures apply psychosocial management across all settings (natural hazard-related events, human-induced events, disease outbreaks, etc.)? b. How can psychosocial impacts be monitored effectively (e.g. PTSD)? c. How should underlying risks and impacts be framed? d. What well-being indicators can be used to evaluate resilience for emergencies and disasters?
3. Community disaster risk management including disaster risk literacy and addressing the needs of subpopulations	No additional questions were proposed. Follow up is required.
4. Health workforce development	a. What are the indicators to evaluate training effectiveness? b. How can "occupational health and safety" be more effectively addressed in Health EDRM workforce development?
5. Research methods and ethics	a. How can ethical approval processes for Health EDRM be accelerated? b. How can effective structures, mechanisms or frameworks for Health EDRM research funding be established/strengthened?
6. Translational research	As the interaction between science, policy and practice has been poor traditionally and is in need of improvement, the Health ERDM research agenda is

	expected to work on promoting successful mechanisms to accelerate the translation of research findings into policy and practice.
7. Complex health risk conceptualization	Health EDRM research is expected to deal with a wide range of risks and events, including those associated with natural hazards, human-induced hazards and other complex emergencies. The research agenda is expected to show possible directions for conceptualizing the complex health risks associated with different emergencies and disasters.
8. Cross-disciplinary research agenda	Health EDRM operations are expected to be conducted in collaboration with multiple sectors. The research agenda is expected to highlight the overlapping research topics with other sectors and the possible lessons for effective multi-disciplinary collaboration.

4.3. Prioritization criteria

To determine research themes for the Research Agenda, a process for consensus building with appropriate prioritization criteria is needed. The experts proposed general items for the criteria, which will be further reviewed and finalized, accompanied by the rationale for each criterion.

The tentative criteria for research prioritization include: a) fit for purpose, b) scientifically rigorous, c) timeliness, d) ability for translation for implementation, e) transparency, f) ethical soundness, g) usefulness for multiple sectors, h) validity for multiple types of risks/hazardous events/disasters, i) high political and social impact, and j) benefit for countries.

5. Key stakeholders to be involved

In this session, potential stakeholder mapping with discussion on the roles of key players was conducted. The experts identified four categories of stakeholders. As the first category, scientists and academics were identified. The major role of scientists to produce quality research and academics to provide high-quality education and training for the Health EDRM workforce and young researchers were highlighted. Scientific expertise closely linked with Health EDRM was also suggested, which included not only the health sciences (e.g. epidemiology, medicine, nursing and public health), but also the social sciences (e.g. communication science, geography and economy). As the second category, research users were identified. In this category, policy-makers including government officials and practitioners including frontline workers, hospital administrators and NGOs were suggested. The third category was funders, which included public and private research foundations, publishers and

media. The last category was research supporters, which include military services, database organizers, networking service providers and language translators.

The range of stakeholders to be involved in the research agenda development process will be further discussed and determined.

6. TPRN operation

Recommendations for TPRN activities for the successful development of the research agenda and effective function to achieve the objectives of TPRN were discussed.

The TPRN activities should align with the key outputs of the GPW13, and help to implement the Health EDRM Framework, the International Health Regulations, the Sendai Framework and other relevant frameworks. The TPRN should also work towards integrating a global health ERM research agenda into a global health EDRM research strategy to ensure that other aspects of effective research are also addressed, such as translation of research into policies and practice, and strengthening of the capacity of the Health EDRM research community. Addressing the gaps in translating research findings into policy and practices, the TPRN was recommended to engage and provide a bridge for both researchers and policy-makers and practitioners for better mutual understanding and collaboration.

The participants saw value in the TPRN focusing on facilitating, promoting and synthesizing research into useful products rather conducting research. For example, sharing knowledge on "what works and what does not work" was recommended for effective translation of research into policy and practice.

The TPRN was also recommended to continue its work on developing a book on Health EDRM research methods which facilitates the production of more high-quality research. This falls within the category of research capacity development. Integrating less-documented research areas such as migrant health and heatwaves as well as less-read literature written in local languages was also recommended.

WHO Regional Offices also recommended that the TPRN secretariat work with Regional Focal Points to facilitate and lead regional research networks, and link the TPRN to the regional networks.

7. Conclusion

Participants of the TPRN first core group meeting agreed on the process to develop the Health EDRM research agenda and adopted the initial draft outlining the process. Key recommendations were suggested to make the research agenda responsive to needs at the global, regional, and national levels. First and foremost was the need to ground the Research Agenda into existing global and regional frameworks related to Health EDRM under which many

countries have established their priorities for action which need to be supported by evidence and research. Participants agreed on expanding the stakeholders of the TPRN and updating the research areas and themes and the criteria for prioritizing research themes. Lastly, recommendations for the TPRN operations and activities, including the need to formalize the status of the TPRN, were made.

Annexes

Annex 1. **Meeting Programme**

Day 1: 17 October 2019

09:00-09:30	**Registration**	
09:30-10:30	**Introduction** - Opening remarks - Introduction of the participants - Objectives of the meeting - WHO Health EDRM Framework, possible research agenda and expected role of the TPRN [4] - TPRN establishment, previous and ongoing work [1-3, 5-10]	**Moderator:** Ryoma Kayano - Sarah Louise Barber - All participants - Ryoma Kayano - Jonathan Abrahams - Virginia Murray
10:30-12:00	**Building the WHO Research Agenda for Health EDRM** - Proposed process and scope for developing the research agenda - Role and expectation of academia - Role and expectation of government officials - Environmental scanning and developing the roadmap	**Moderator:** Jonathan Abrahams - Ryoma Kayano - Emily YY Chan - Alistair Humphry - All participants
12:00-13:00	**Lunch**	

13:00-15:00	**Input from and expectations of core members and key stakeholders** - PAHO - AFRO - EMRO - EURO - WPRO (unable to attend) - WADEM - Evidence Aid - Japan	**Moderator:** Virginia Murray - Ciro Ugarte - Ngoy Nsenga - Jehan Al Badri - Irshad Shaikh - Heather Papowitz - Nahoko Harada - Ben Heaven Taylor - Yuichi Koido, Tatsuhiko Kubo, Hiroaki Tomita, Sonoe Mashino, Sho Takahashi, Sae Ochi
15:00-15:30	**Break**	
15:30-17:00	**Group session** Small group discussion : 1) Research areas and possible funders 2) Possible key stakeholders to involve **3)** Expected function and role of the TPRN	Group members (choose one facilitator and one rapporteur) 1) Emily Chan, Irshad Shakir, Jehan Ali Badri, Yuichi Koido, Nahoko Harada, Ben Taylor 2) Virginia Murray, Ngoy Nsenga, Hiroaki Tomita, Sonoe Mashino, Sae Ochi 3) Ciro Ugarte, Alistair Humphry, Jonathan Abrahams, Tatsuhiko Kubo, Sho Takahashi
17:00-18:00	Feedback from small groups Discussion on maximizing the impact of Health-EDRM research and TPRN activities Closing Day 1	**Moderator:** Emily YY Chan

Day 2: Friday, 18 October 2019

09:00-09:30	Review of Day 1	**Moderator**: Ryoma Kayano
09:30-11:30	**Conclusion session:** 1) Draft plan to build the Health EDRM research agenda 2) Draft plan to engage key stakeholders and possible funders 3) Draft the TPRN activity plan towards 2021	**Moderator:** Jonathan Abrahams 1) Emily Chan 2) Virginia Murray 3) Ryoma Kayano
11:30-12:00	**Closing session:** - Feedback from participants and observers - Closing Remarks	**Moderator:** Ciro Ugarte - All participants and observers - Sarah Louise Barber
(12:00-)	(**Lunch**, and WKC Forum)	

Annex 2. **Participants**

Co-chairs of TPRN

Dr Emily Ying-Yang Chan, Professor and Assistant Dean (Development), Faculty of Medicine, Chinese University of Hong Kong, People's Republic of China

Dr Virginia Murray, Head of Global Disaster Risk Reduction, Public Health England, the United Kingdom

Invited External Experts

Dr Shinichi Egawa, Professor, Division of International Cooperation for Disaster Medicine, International Research Institute of Disaster Science (IRIDeS), Tohoku University

Dr Nahoko Harada, Professor, Department of Psychiatric and Mental Health Nursing, School of Nursing, Faculty of Medicine, University of Miyazaki

Dr Alistair Humphrey, Medical Officer of Health, Canterbury, Ministry of Health / Canterbury District Health Board, New Zealand

Dr Yuichi Koido, Director, Disaster Medical Assistance Team (DMAT) Secretariat, Ministry of Health, Labor and Welfare, Japan

Dr Tatsuhiko Kubo, Professor, Department of Public Health and Health Policy, Hiroshima University

Professor Sonoe Mashino, Executive Director, Research Institute of Nursing Care for People and Community, University of Hyogo

Dr Sae Ochi, Lecturer, Department of Laboratory Medicine, Jikei University School of Medicine Kashiwa Hospital

Dr Yasuhiro Otomo*, Professor and Chairman, Dept. of Acute Critical Care and Disaster Medicine, Graduate School of Medicine and dental Sciences, Tokyo Medical and Dental University

Dr Sho Takahashi, Associate Professor, Department of Disaster and Community Psychiatry, Division of Clinical Medicine, Faculty of Medicine, University of Tsukuba

Dr Ben Taylor, Chief Executive Officer, Evidence Aid, the United Kingdom

Dr Hiroaki Tomita, Professor, Department of Psychiatry, International Research Institute of Disaster Science (IRIDeS), Tohoku University

Observers

Dr Sakiko Kanbara, Professor, Graduate School of Nursing, University of Kochi

Dr Masahiro Kurata, Associate Professor, Disaster Prevention Research Institute, Kyoto University

Dr Yoshikazu Maruyama, Director, Disaster Medicine, Japanese Red Cross Medical Center

Dr Shigeru Ohtsuru, Associate Professor and Vice Chairman, Emergency Department, Kyoto University Hospital

Dr Toshiyuki Ojima, Professor, Department of Community Health and Preventive Medicine, Hamamatsu University School of Medicine

Dr Manabu Shimoto, Assistant Professor, Primary Care and Primary Medicine, Kyoto University Hospital

Dr Yoshihisa Tsuji, Associate Professor, Director, Institutional Research Center, Shiga University of Medical Science

World Health Organization

Mr Jonathan Abrahams, Disaster Risk Management Focal Point, Country Health Emergency Preparedness and International Health Regulations (CPI), Department, World Health Organization (WHO), Switzerland

Dr Jehan Al-Badri, National Professional Officer, WHO Representative Office in Iraq, Regional Office for the Eastern Mediterranean (EMRO), Iraq

Dr Sarah Louise Barber, Director, WHO Centre for Health Development (WHO Kobe Centre)

Dr Ryoma Kayano, Technical Officer, WHO Centre for Health Development (WHO Kobe Centre)

Dr Patou Masika Musumari, Consultant, WHO Centre for Health Development (WHO Kobe Centre)

Dr Ngoy Nsenga, Team Lead, East and Southern Africa, WHO Emergency Programmes for Regional Office for Africa (AFRO), Kenya

Dr Heather Papowitz*, Programme Area Manager, Emergency Operations, WHO Health Emergencies Programme, WHO Regional Office for the Western Pacific (WPRO), Philippines

Dr Irshad Ali Shaikh, Coordinator, Health Security Program, WHO Health Emergencies Programme, WHO Country Office in Turkey, Regional Office for Europe (EURO), Turkey

Dr Ciro Ugarte, Director, Department of Health Emergencies, Pan American Health Organization, World Health Organization (PAHO), United States of America

*Unable to attend