WHO thematic platform for health emergency and disaster risk management research network

Report of the fifth core group meeting

“Building partnerships for promoting Health EDRM research in countries and regions”

14 November 2023
Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive summary</td>
<td>1</td>
</tr>
<tr>
<td>Background and objectives</td>
<td>2</td>
</tr>
<tr>
<td>Meeting summary</td>
<td>3</td>
</tr>
<tr>
<td>Opening remarks</td>
<td>3</td>
</tr>
<tr>
<td>Session 1: promoting Health EDRM research in countries and regions</td>
<td>4</td>
</tr>
<tr>
<td>Session 2: planning for the future of Health EDRM research</td>
<td>7</td>
</tr>
<tr>
<td>Conclusion</td>
<td>9</td>
</tr>
<tr>
<td>References</td>
<td>10</td>
</tr>
<tr>
<td>Annex 1</td>
<td>12</td>
</tr>
<tr>
<td>Annex 2</td>
<td>13</td>
</tr>
</tbody>
</table>
Executive summary

The World Health Organization Centre for Health Development (WHO Kobe Centre – WKC) convened the fifth core group meeting of the WHO Thematic Platform for the Health Emergency and Disaster Risk Management Research Network (Health EDRM RN) in Kobe, Japan on 14 November 2023. The meeting aimed to share ongoing efforts, progress and challenges in research activities in the field of health emergency and disaster risk management (Health EDRM) and to identify agreed strategic actions for the Health EDRM RN.

Twenty-five World Health Organization (WHO) and Health EDRM experts participated in the meeting. They identified a strong need for strengthened partnerships and collaboration at the national, regional and global levels to promote research for developing and implementing evidence-based policies and programmes to manage health risks and impacts of health emergencies and disasters.

At the end of the meeting, participants agreed on four key actions for the Health EDRM RN for 2024–2025:

- Conduct periodic strategic discussions to update and reframe research themes and priorities involving WHO Headquarters and regional offices, Health EDRM RN participants, and other partners.
- Ensure real-time evidence remains applicable to ongoing challenges by leveraging the Health EDRM Knowledge Hub to provide timely evidence to inform effective policies, guidelines, practice, capacity development and evaluation.
- Foster collaboration at the global, regional, national and inter-regional levels, paying particular attention to countries seeking increased Health EDRM research capabilities and outputs in low- and middle-income countries. This includes increasing the number of case studies and addressing data gaps.
- Promote research in regions and countries, and involve more researchers and stakeholders:
  - Maintain dialogue to facilitate effective translation of research into policies, programmes, guidance, capacity development and integration of Health EDRM research into WHO research policies and programmes involving regional offices, WHO country offices, the WHO Office of the Chief Scientist, WHO Headquarters departments, WHO collaborating centres and other relevant partners.
  - Enhance the usability of the WHO Guidance on Research Methods for Health EDRM through webinars, workshops and hands-on tools for policy-makers and scientists, coordinated by WHO Headquarters and regional offices and Health EDRM RN participants. This includes producing concise two-page policy briefs.
  - Increase the visibility of publications and application of Health EDRM RN resources, particularly through engagement with universities and academic and professional societies.
  - Plan a 2025 revision of the WHO Guidance on Research Methods for Health EDRM, with the addition of new chapters, and contributions from Health EDRM RN participants, WHO Headquarters, regional offices and other partners.
  - Continue dialogue for multidisciplinary research collaboration with organizations such as the Global Alliance of Disaster Research Institutes (GADRI), the International Union of Nutritional Sciences, the Japanese Association for Disaster Medicine (JADM), the World Association for Disaster and Emergency Medicine (WADEM), and the World Society of Disaster Nursing (WSDN).
Background and objectives

Reducing risks associated with emergencies and disasters to protect people and promote population health is one of the top goals and priorities of the World Health Organization (WHO), indicated in the Thirteenth General Programme of Work (GPW 13) (1) and the draft Fourteenth General Programme of Work (GPW 14) (2).

The Sendai Framework for Disaster Risk Reduction 2015–2030 (Sendai Framework) highlighted the importance of health in disaster risk management (3).

In 2019, WHO released the Health Emergency and Disaster Risk Management (Health EDRM) Framework to support the implementation of the Sendai Framework (4), the International Health Regulations (2005) (5), the Sustainable Development Goals (2015) (6), and the Paris Agreement on Climate Change (2016) (7).

The WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Network (Health EDRM RN) was established in 2018 to strengthen research and to promote knowledge and robust scientific evidence for policies and programmes to manage health risks associated with all types of emergencies and disasters. The Health EDRM RN fosters collaboration between academia, government officials and other stakeholders around the world and has become a global network with over 300 participants (8).

The WHO Centre for Health Development (WHO Kobe Centre – WKC) acts as the Secretariat of the Health EDRM RN and has organized the annual core group meeting since 2019 (9–12). The core group meeting invites two co-chairs, disaster risk reduction and resilience focal points from all six WHO regional offices, and several key experts, and serves as a platform to discuss and identify strategic direction for the Health EDRM RN.

In 2023, the Health EDRM RN core group meeting was organized on 14 November in conjunction with the WHO disaster risk reduction and resilience focal point meeting on 13 November. The core group meeting aimed to share ongoing efforts, progress and challenges in research activities in the field of Health EDRM and to reach agreement on the 2024–2025 strategic action plans for the Health EDRM RN, with a focus on the following:

- Discuss opportunities and challenges around Health EDRM implementation, based on the 2022–2023 experiences in countries and globally, particularly focusing on disaster risk reduction and resilience in the context of COVID-19, huge natural disasters (e.g. the earthquake in Türkiye and the Syrian Arab Republic), humanitarian settings and other region-specific events.
- Review the 2022–2023 progress of Health EDRM research and related scientific findings. Discuss the strategic direction of Health EDRM RN activities to further promote international research collaboration and enhance robust scientific evidence to inform policies and programmes in countries and regions.
- Discuss expected linkages with existing WHO initiatives to maximize the impact of Health EDRM activities by organization-wide collaboration.

This report summarizes the discussions and decisions of the meeting.
Meeting summary

The meeting programme and a list of participants are available in Annexes 1 and 2.

Opening remarks

Dr Ryoma Kayano (Technical Officer, WKC, Secretariat of the Health EDRM RN) welcomed the attendees. He presented an overview of the achievements and ongoing research projects from 2022–2023, including the following:

- Developed and disseminated online learning materials, such as video lectures and slideshows for all chapters of the WHO Guidance on Research Methods for Health EDRM (13).
- Published a Japanese version of the WHO Guidance on Research Methods for Health EDRM.
- Organized a joint webinar with the WHO Regional Office for the Eastern Mediterranean and the WHO Regional Office for Europe in July 2023 to promote Health EDRM research to national policy-makers.
- Continued to build regional and professional partnerships, including with the Association of Southeast Asian Nations (ASEAN) and the World Association for Disaster and Emergency Medicine (WADEM).

The co-chairs of the Health EDRM RN are Associate Professor Jonathan Abrahams (Director, Disaster Resilience Initiative, Accident Research Centre, Monash University, Clayton, Australia) and Professor Virginia Murray (Head of Global Disaster Risk Reduction, UK Health Security Agency, London, United Kingdom of Great Britain and Northern Ireland). They provided a comprehensive background of the Health EDRM RN and defined the objectives of the meeting, emphasizing the critical roles and achievements of the Health EDRM RN.

Dr Nirmal Kandel (Unit Head, Evidence and Analytics for Health Security, WHO, Geneva, Switzerland) attended on behalf of Dr Stella Chungong (Director, Health Security Preparedness Department, WHO, Geneva, Switzerland). Dr Kandel shared the discussion summary from the fourth annual internal WHO meeting of disaster risk reduction and resilience focal points held on 13 November 2023. He emphasized that although implementing risk assessment tools such as the Strategic Toolkit for Assessing Risks (STAR) to develop strategic national disaster risk management plans is crucial, there is a strong need to promote research on disaster risk reduction and resilience and Health EDRM in all regions through cross-regional and multisectoral partnerships.
Session 1: promoting Health EDRM research in countries and regions

Key points

- Regional office representatives described challenges in setting priorities for research due to diverse contexts of regions and countries.
- Regional office representatives stressed the importance of partnerships across regions and emphasized coordinated WHO-wide research promotion activities such as webinars and workshops.
- There is a strong need for the development of step-by-step guidance for policy-makers on how to promote research and use evidence for better policies and programmes. This will be developed as the annex of the WHO Guidance on Research Methods for Health EDRM.

Session 1 was moderated by Associate Professor Jonathan Abrahams. It aimed to outline recent progress on Health EDRM research and to gain inputs from WHO regional offices and participants to determine strategic directions, priorities and collective efforts for progressing the overarching objectives of the Health EDRM RN.

Dr Ryoma Kayano introduced the recent progress in Health EDRM research activities. He emphasized the importance of cross-regional collaboration to maximize the impact of Health EDRM activities in response to disasters such as the earthquake in Türkiye and the Syrian Arab Republic. Dr Kayano shared the successful completion of a joint webinar organized with the WHO Regional Office for the Eastern Mediterranean and the WHO Regional Office for Europe in July 2023 as a good example of cross-regional collaboration. He highlighted emerging needs in research and academic partnership through various networks such as the ASEAN Academic Network. National delegates and experts at the conferences and webinars had identified a strong need for the development of step-by-step guidance for policy-makers on promoting Health EDRM research.

Dr Dick Chamla (Emergency Preparedness Manager, Emergency Response, WHO Regional Office for Africa, Brazzaville, Congo) stressed the urgent need for targeted research and to build research capabilities in Africa given the numerous public health emergencies and humanitarian crises across the region. He underscored the ongoing discussions to strategically identify research priorities for the WHO Regional Office for Africa with key partners among the African research network for emergencies. The African region needs more research on humanitarian crises and climate change-related issues and is committed to aiding Member States in building research capacities through webinars and expert consultations. These activities would largely benefit from collaboration with the Health EDRM RN.
Dr Fadi El-Jardali (Professor of Health Policy and Systems; Founder and Director, Knowledge to Policy Center; Director, WHO Collaborating Center for Evidence-Informed Policy and Practice; and Co-director, Center for Systematic Reviews on Health Policy and Systems Research, Faculty of Health Sciences, American University of Beirut, Beirut, Lebanon) stressed the critical need for accessible and applicable evidence during emergencies to inform public health decisions. He recommended development of a step-by-step guide for policy-makers on how to produce, access and use evidence.

Dr Jameel Talal Abualenain (General Supervisor, General Directorate of Emergencies, Disasters and Medical Transportation, Ministry of Health; and Director General, WHO Collaborating Center for Disaster and Emergency Management, Riyadh, Saudi Arabia) shared the challenges in producing good-quality research projects in the WHO Eastern Mediterranean Region, and requested coordination and support for research collaboration between universities in and out of the region to enhance research capabilities.

Dr Tanja Schmidt (Team Lead, Preparedness, Readiness and Capacity-building, Health Emergencies Programme, WHO Regional Office for Europe, Copenhagen, Denmark) expressed challenges due to the varied landscape of the European region, encompassing 53 Member States with differing capacity levels. The need for a timely response to emergencies with readily available evidence remains a challenge, even in countries where research capacity is perceived to be strong. These challenges amplify the importance of having “living evidence” that adapts quickly to emerging needs and circumstances in diverse contexts and that allows immediate responses as well as preparedness, research and evidence generation.

Dr Schmidt recognized that the joint webinar in July 2023 organized by the WHO Eastern Mediterranean Regional Office, the WHO Regional Office for Europe and WKC was a significant milestone for bringing research into closer alignment with the needs of Member States, promoting interregional collaboration and enhancing research promotion. This emphasized the importance of further collaboration such as in-person workshops for policy-makers to promote Health EDRM research in regions and countries.

Dr Reuben Samuel (Programme Area Manager, Country Emergency Preparedness and International Health Regulations, WHO Health Emergencies Programme, WHO Regional Office for South-East Asia, New Delhi, India) highlighted the challenges of sharing information and data within the region, advocating for initiatives that would improve data quality. He cited successful examples in Myanmar and Nepal, where linking ministry data with WHO personnel supported the identification of research priorities and evidence generation. Dr Samuel conveyed the intention of the WHO Regional Office for South-East Asia to expand such initiatives, recognizing their potential to create a more robust data-sharing culture that supports health research and policy-making. He highlighted the importance of prioritizing studies on public health and social measures: these could provide meaningful and actionable evidence, because many questions posed by decision-makers were oriented towards practical aspects of public health and social measures rather than epidemiological profiles or clinical study results.

Mr Jan-Erik Larsen (Operations Support and Logistics Team Lead, Emergency Operations, WHO Health Emergencies Programme, WHO Regional Office for the Western Pacific, Manila, Philippines) discussed the varied research needs of the Western Pacific Region, with emphasis on the importance of operational research and the need for stronger
evidence to support policy-makers and inform their decisions. He addressed the financial considerations during emergency responses, including the costs associated with human resources and supplies, and the broader issue of sustainability. He highlighted that the impact of climate change for Pacific island countries is one of the high-priority issues in the region, and evidence-based actions are required to increase resilience and capacity to respond to climate-related challenges.

In his role as moderator, Associate Professor Jonathan Abrahams reiterated the necessity of refining research methods and approaches to better serve the needs of policy-makers and practitioners across all aspects of Health EDRM and to strengthen community resilience. He advocated for a tailored approach to directly address the practical, often urgent questions facing policy-makers and practitioners before, during and after emergencies. He stressed the critical need for concise, well-summarized evidence that enables decision-makers and practitioners to apply clear and authoritative guidance drawn from robust research. This includes the ability to use evidence to respond more effectively to emergencies. He also advised of universities' uptake of the WHO Guidance on Research Methods for Health EDRM and related learning materials, with possible establishment of a university consortium to scale up use of the Guidance.

Dr Nirmal Kandel emphasized the importance of preparedness and advocated for strengthened data collection and research. He suggested organizing quarterly meetings with regional representations. He highlighted the value of international academic collaboration, especially partnerships with universities in the global south, which are instrumental in building a comprehensive, globally coordinated response to public health emergencies. This collaborative approach is integral to developing a robust framework for preparedness and ensuring the global community can respond effectively to future health crises.

At the end of the session, follow-up actions proposed by core group members were agreed:

- Develop step-by-step guidance for policy-makers on how to promote research and use evidence for better policies and programmes. This will be developed as the annex of the WHO Guidance on Research Methods for Health EDRM.
- Maintain efforts to promote research in regions and countries through webinars and workshops.
- Facilitate cross-regional collaboration to enhance research capabilities.
- Follow up communication with Health EDRM RN participants to scale up the use of the WHO Guidance on the Research Methods for Health EDRM and related materials.
Session 2: planning for the future of Health EDRM research

Key points

- To support the research and initiatives to effectively address emerging health threats, securing financial resources for adequate funding is essential. It is also important to integrate broader socioeconomic factors into health initiatives and include Health EDRM research in cross-sectoral dialogue to ensure adequate financial allocation to the health sector for Health EDRM and associated research.
- A practical approach is required to identify research themes and priorities and to avoid duplication. This approach should provide clear visibility in the development and tracking of priorities, and enable evaluation of progress consistently.

Session 2, moderated by Professor Virginia Murray, began with an overview of recent developments in Health EDRM and in multisectoral disaster risk reduction and resilience. Subsequent discussions focused on various aspects related to health initiatives and their integration into broader socioeconomic and whole-of-society contexts.

Dr Fadi El-Jardali suggested adding a chapter on knowledge-sharing and translation to the WHO Guidance on Research Methods for Health EDRM, which will enhance the application of research findings in policy and practice settings.

Dr Tatsuhiko Kubo (Professor, Department of Public Health and Health Policy, Hiroshima University, Hiroshima, Japan) proposed a practical approach to identify research priorities, including reframing existing research themes and considering recent developments and evolving demands. Given the limited types and numbers of journals dedicated to Health EDRM research, he suggested creating a list of journals and encouraging researchers in regions and countries to submit more case studies to enhance knowledge and evidence globally.

Associate Professor Jonathan Abrahams underscored the need for WHO outputs to be fit for purpose, advocating for concise two-page policy briefs and hands-on tools on Health EDRM research promotion for policy-makers, scientists and academia, including the application of the WHO Guidance on Research Methods for Health EDRM. He suggested releasing the revision of the Guidance towards the date of the 2025 WADEM Conference in Tokyo, with a greater emphasis on case studies.

Dr Shinichi Egawa (Professor, International Cooperation for Disaster Medicine Laboratory, International Research Institute of Disaster Science, Tohoku University, Sendai, Japan), as chair of the programme committee of the 2025 WADEM Conference to be held in Japan, offered a possible session on the use and dissemination of the WHO Guidance on Research Methods for Health EDRM.
Dr Sonoe Mashino (Executive Director, Research Institute of Nursing Care for People and Community, University of Hyogo, Akashi, Japan; Director, WHO Collaborating Centre for Disaster Risk Management for Health, Akashi, Japan; and Chair, World Society of Disaster Nursing (WSDN)) underscored the need for further collaboration between WADEM, WHO and WSDN, linking with the 2024 WSDN Conference to be held in Japan.

The session chair Professor Virginia Murray invited comments from observers. Suggestions included possible collaboration with the Governments’ Official Development Assistance, and further standardization of data collection across sectors. Professor Murray stressed that securing adequate financial resources is essential to support research and initiatives in this field and ensure Health EDRM can effectively address emerging health threats and contribute to global health security. She advocated for WHO and the health community to enhance their roles in the United Nations Early Warnings for All initiative, multi-hazard early warning systems and signals, and other interagency and multisectoral initiatives of relevance to the Health EDRM RN, including revision of the United Nations Office for Disaster Risk Reduction and International Security Council hazard information profiles. She concluded the session by encouraging the Secretariat to further engage Health EDRM RN participants to strategically update the knowledge and evidence.
Conclusion

In the closing session, Dr Ryoma Kayano shared a set of agreed key actions to advance Health EDRM research, reflecting the key challenges and opportunities discussed in the meeting:

- Conduct periodic strategic discussions to update and reframe research themes and priorities involving WHO Headquarters and regional offices, Health EDRM RN participants, and other partners.
- Ensure real-time evidence remains applicable to ongoing challenges by leveraging the WHO Health EDRM Knowledge Hub to provide timely evidence to inform effective policies, guidelines, practice, capacity development and evaluation. This includes producing concise two-page policy briefs.
- Foster collaboration at the global, regional, national and inter-regional levels, paying particular attention to countries seeking increased Health EDRM research capabilities and outputs in low- and middle-income countries. This includes increasing the number of case studies and addressing data gaps.
- Promote research in regions and countries, involving more researchers and stakeholders:
  - Maintain dialogue to facilitate the effective translation of research into policies, programmes, guidance, capacity development and integration of Health EDRM research into WHO research policies and programmes involving regional offices, WHO country offices, the WHO Office of the Chief Scientist, WHO Headquarters departments, WHO collaborating centres and other relevant partners.
  - Enhance the usability of the WHO Guidance on Research Methods for Health EDRM through webinars, workshops and hands-on tools for policy-makers and scientists, coordinated by WHO Headquarters and regional offices and Health EDRM RN participants.
  - Increase the visibility of publications and application of Health EDRM RN resources, particularly through engagement with universities and academic and professional societies.
  - Plan a 2025 revision of the WHO Guidance on Research Methods for Health EDRM, with the addition of new chapters, with contributions from Health EDRM RN participants, WHO Headquarters and regional offices, and other partners.
  - Continue dialogue for multidisciplinary research collaboration with organizations such as the Global Alliance of Disaster Research Institutes (GADRI), the International Union of Nutritional Sciences, the Japanese Association for Disaster Medicine (JADM), WADEM and WSDN.

Dr Sarah Louise Barber (Director, WKC) concluded the meeting by thanking the participants. The fifth core group meeting served as an important opportunity to share ongoing initiatives and current challenges in regions and mutual understanding among WHO Headquarters and regional office focal points. Participants agreed that close partnerships should be built among WHO Headquarters, regional offices and WKC, and requested that the Secretariat develop a concrete strategic plan with a clear timeline.
References


Annex 1

Meeting programme

Date and time: 14 November 2023, 09:00–12:00, in-person meeting  
Venue: WHO Centre for Health Development (WHO Kobe Centre – WKC), Kobe, Japan

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda item</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:00–09:15</td>
<td>Opening remarks</td>
<td>Dr Ryoma Kayano</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health EDRM RN co-chairs</td>
</tr>
<tr>
<td></td>
<td>Feedback on WHO disaster risk reduction and resilience focal point meeting</td>
<td>Dr Nirmal Kandel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session 1:</td>
<td>promoting Health EDRM research in regions and countries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Session chair: Associate Professor Jonathan Abrahams, Health EDRM RN co-chair</td>
<td></td>
</tr>
<tr>
<td>09:15–09:30</td>
<td>Recent progress on promoting Health EDRM research and research agenda building</td>
<td>Dr Ryoma Kayano</td>
</tr>
<tr>
<td>09:30–10:30</td>
<td>Discussion</td>
<td>Disaster risk reduction and resilience focal points of WHO Headquarters and regional offices</td>
</tr>
<tr>
<td></td>
<td>Promoting research in regions and countries</td>
<td>Invited experts</td>
</tr>
<tr>
<td></td>
<td>Research agenda building</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session 2:</td>
<td>planning for the future of Health EDRM research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Session chair: Professor Virginia Murray, Health EDRM RN co-chair</td>
<td></td>
</tr>
<tr>
<td>10:30–10:40</td>
<td>Overview of recent developments related to Health EDRM</td>
<td>Professor Virginia Murray</td>
</tr>
<tr>
<td>10:40–11:00</td>
<td>Discussion</td>
<td>Disaster risk reduction and resilience focal points of WHO Headquarters and regional offices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Invited experts</td>
</tr>
<tr>
<td>Closing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:40–12:00</td>
<td>Wrap up for agreement</td>
<td>Dr Ryoma Kayano</td>
</tr>
<tr>
<td></td>
<td>Closing remarks</td>
<td>Dr Sarah Louise Barber</td>
</tr>
</tbody>
</table>
Annex 2

Participants

Core group of WHO Health EDRM Research Network

Associate Professor Jonathan Abrahams, Director, Monash University Disaster Resilience Initiative, Monash University Accident Research Centre, Monash University, Melbourne, Australia; Co-chair, Health EDRM Research Network

Dr Jameel Talal Abualenain, General Supervisor, General Directorate of Emergencies, Disasters and Medical Transportation, Ministry of Health, Riyadh; and Director General, WHO Collaborating Center for Disaster and Emergency Management, Riyadh, Saudi Arabia

Dr Fadi El-Jardali, Director, Professor of Health Policy and Systems; Founder and Director, Knowledge to Policy Center; Director, WHO Collaborating Center for Evidence-Informed Policy and Practice; and Co-director, Center for Systematic Reviews on Health Policy and Systems Research, Faculty of Health Sciences, American University of Beirut, Beirut, Lebanon

Dr Dick Damas Chamla, Programme Area Manager, Emergency Preparedness EPR Cluster, WHO Regional Office for Africa, Brazzaville, Congo

Dr Nirmal Kandel, Unit Head, Evidence and Analytics for Health Security, World Health Organization, Geneva, Switzerland

Dr Ryoma Kayano, Technical Officer, Secretariat of the Health EDRM RN, WHO Centre for Health Development, Kobe, Japan

Mr Jan-Erik Larsen, Operations Support and Logistics Team Lead, Emergency Operations, WHO Health Emergencies Programme, WHO Regional Office for the Western Pacific, Manila, Philippines

Professor Virginia Murray, Head of Global Disaster Risk Reduction, UK Health Security Agency, London, United Kingdom of Great Britain and Northern Ireland; Co-chair, Health EDRM Research Network

Dr Reuben Samuel, Programme Area Manager, Country Emergency Preparedness and International Health Regulations, WHO Health Emergencies Programme, WHO Regional Office for South-East Asia, New Delhi, India

Dr Tanja Schmidt, Team Lead, Preparedness, Readiness and Capacity-building, Health Emergencies Programme, WHO Regional Office for Europe, Copenhagen, Denmark

1 Dr Abualenain and Dr El-Jardali are on behalf of Dr Jehan Al-Badri, Technical Officer, Country Health Emergency Preparedness and IHR, WHO Regional Office for the Eastern Mediterranean, Cairo, Egypt
WHO internal experts

Dr Sarah Louise Barber, Director, WHO Centre for Health Development, Kobe, Japan
Ms Makiko Kato MacDermot, Consultant, Secretariat of the WHO Health EDRM Regional Network, WHO Centre for Health Development, Kobe, Japan
Mr Ryo Yokoe, Consultant, Local Engagement, WHO Centre for Health Development, Kobe, Japan

Invited external experts

Dr Shinichi Egawa, Professor, International Cooperation for Disaster Medicine Laboratory, International Research Institute of Disaster Science, Tohoku University, Sendai, Japan
Dr Tatsuhiko Kubo, Professor, Department of Public Health and Health Policy, Hiroshima University, Hiroshima, Japan
Dr Sonoe Mashino, Executive Director, Research Institute of Nursing Care for People and Community, University of Hyogo, Akashi, Japan; Director, WHO Collaborating Centre for Disaster Risk Management for Health, Akashi, Japan; and Chairperson, World Society of Disaster Nursing

Observers

Dr Nahoko Harada, Professor, Nursing Science, Graduate School of Interdisciplinary Science and Engineering in Health Systems; and Professor, Department of Fundamental Nursing, School of Nursing, Faculty of Health Sciences, Okayama University, Okayama, Japan
Dr Yuichi Koido, Director General, Japan Disaster Medical Assistance Team Secretariat, Ministry of Health, Labour and Welfare, National Hospital Organization Headquarters, Tokyo, Japan
Dr Masahiro Kurata, Associate Professor, Disaster Prevention Research Institute, Kyoto University, Kyoto, Japan
Dr Shuhei Nomura, Project Associate Professor, Department of Health Policy and Management, School of Medicine, Keio University, Tokyo, Japan
Dr Sae Ochi, Professor, Department of Laboratory Medicine, Jikei University School of Medicine, Tokyo, Japan
Dr Yasuhiro Otomo, Chairman, the Board Directors of the Japanese Association for Acute Medicine; Director, National Disaster Medical Center; and Chair, Executive Committee, Japan Disaster Medical Assistance Team, Ministry of Health, Labour and Welfare, Tokyo, Japan
Mr Paul E Rosenberg, Associate Programme Management Officer, United Nations Office for Disaster Risk Reduction, Kobe, Japan
Dr Viroj Tangcharoensathien, Senior Advisor, International Health Policy Program Thailand, Bangkok Thailand
Dr Hirokazu Tatano, Professor, Disaster Prevention Research Institute, Kyoto University, Kyoto; and Secretary-General, Global Alliance of Disaster Research Institutes, Kyoto, Japan