Health Emergency and Disaster Risk Management (Health EDRM)

Background

One of the three strategic priorities under the WHO's 13th General Programme of Work for 2019-23 is to ensure that one billion more people will be better protected from health emergencies. This priority aims to build and sustain resilient national, regional and global capacities, and to ensure that populations affected by acute and protracted emergencies have rapid access to essential life-saving health services. The WKC has contributed to the global movement to enhance scientific evidence to improve Health EDRM, as represented by the WHO Thematic Platform for Health EDRM Research Network (TPRN). Health needs have been highlighted in the Sendai Framework on Disaster Risk Reduction 2015-2030 (Sendai Framework), the resulting document of the 3rd UN World Conference on Disaster Risk Reduction, followed by WHO Health EDRM Framework 2019. The WKC is uniquely placed to continuously engage with experts in Japan and globally who have extensive experience in prevention, preparedness, response and recovery from severe disasters. Based on the research gap analysis and recommendations from an expert meeting in Kobe in 2018, the 1st TPRN Core Group Meeting in Awaji in 2019, and the lessons and experience from Japan, WKC has selected several research areas to focus on during 2018-2026. In addition, WKC has sought to incorporate COVID-19 in response to the emerging research needs of Health EDRM in the context of COVID-19.

Key research areas

1. To address gaps and information needs in the research architecture to enable standardization and ethical issues.
2. To inform about the most appropriate format and key content for health data collection and management and enable greater standardization and comparative analysis of health impact across disaster prevention, preparedness, response and recovery.
3. To carry out research that supports evidence-based policy development enabling effective disaster response, with focus on a holistic approach to the health needs of survivors through adaptable health systems
4. To study the specific health needs of vulnerable sub-populations, including older adults.

Progress report 2019-20

Results from research completed in 2019-20 (2 projects)

In the Kobe Expert Meeting 2018, issues were raised about the gaps in the Health-EDRM research methodology and impact evaluation. Subsequently, WKC joined as core editor in the preparation of the **WHO Guidance on Research Methods for Health-EDRM (2018-2020)** with a multi-disciplinary team of authors of researchers, government officials and WHO officers representing all regions of WHO. It aims to provide practical advice about how to plan, conduct and report a wide variety of studies across different settings. Case studies of direct relevance to Health-EDRM provide real-life examples of research to illustrate the methods and their policy and programmatic impact. This WHO Guidance will be completed in 2020. It consists of six sections with 43 chapters written by and peer reviewed by 140 international experts from 30 countries, including 24 WHO officers from HQ and all Regional Offices. For the effective dissemination and utilization of the guidance, webinars for practical application will be prepared by the authors of each chapter.

Research on **community disaster risk management and specific health needs of subpopulations in collaboration with the University of Hyogo and Kumamoto University (2018-20),** was completed. Researchers conducted a population-based survey to identify the risk and health needs of older adults after disasters. The survey covered the whole population of Mashiki-town, one of the most severely affected areas of the Kumamoto Earthquake in 2016. This research is intended to improve the management of care for older populations. The results of the survey were summarized into a project report, a final research brief in 2019, and a peer-reviewed journal paper is being drafted.

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Research ongoing (2019-2021) and expected results (9 research projects)

In response to the emerging research needs in the context of COVID-19, the **WHO Guidance on Research Methods for Health EDRM** will be revised and updated in 2021 with additional COVID-19 related chapters. Since 2019, WKC has been acting as the secretariat of TPRN with the agreement of HQ and Regional Offices. The 1st **TPRN Core Group Meeting** with focal points in HQ and Regional Offices was held in Awaji, Hyogo, on 17-18 October 2019. During the Core Group Meeting, the plan and process for setting the **WHO Research Agenda on Health-EDRM**, including the expansion of scope of TPRN activities. A journal paper that summarizes the results of the meeting is under preparation. The meeting report is available on WKC website.

Based on the results of the Kobe Expert Meeting 2018, WKC published a call for proposals in 2019 for Health-EDRM research to address the identified research gaps and needs in four areas: health data management, mental health and psychosocial support, health needs of sub-populations and health literacy, and health workforce development. Four research projects below were selected and are currently being implemented.

A **Scoping Review of the Impacts of Disasters and Health Adaptation on Vulnerable Populations in China, Viet Nam and Indonesia** is being conducted by **Griffith University Centre for Environment and Population Health (2019-2020).**The project aims to review the health impact of vulnerable populations affected by climate-related disasters in China, Indonesia and Viet Nam, and identify measures to address their health risks. The initial research brief is available at WKC website. The project will be completed in 2020 with publication of a journal paper and a policy brief.

The second research project is the **Determinants of Long-Term Mental Health Outcomes after Disasters and Health Emergencies: A systematic review and establishment of the Asia Pacific Disaster Mental Health Network,** being carried out by **Curtin University, the Japan National Institute of Mental Health, the Hyogo Institute for Traumatic Stress, University of Melbourne, and Harvard University (2020-2021).** The project has three aims. First, it will determine the risk and protective factors associated with long-term mental health trajectories in the years following disasters and health emergencies. Secondly, it will assess the quality of monitoring and evaluation evidence in the field of disaster mental health research, in line with the Interagency Standing Committee (IASC) Common Monitoring and Evaluation Framework for Mental Health and Psychosocial Support in Emergency Settings. Third, it will establish the Asia Pacific Disaster Mental Health Network to support best practice within the region. The initial research brief is available at WKC website. A journal paper on the establishment of the Asia Pacific Disaster Mental Health Network is under peer-review.

The third research project is the **Health workforce development strategy in health-EDRM: evidence from literature review, case studies and expert consultations.** This research is being carried out by **The Chinese University of Hong Kong, Harvard University, Sichuan University, Tohoku University, University of Hyogo, University of Piemonte Orientale, and the University of the Philippines in Manila (2020-2021).** The project aims to develop a health-EDRM health workforce development strategy for ministries of health to inform policy and practice across WHO regions. The initial research brief is available at WKC website. A journal paper on the research gap and current knowledge mapping is under preparation.

The fourth research project is a **Systematic review and implementation research for health data management before, during and after emergencies and disasters.** This research is being carried out by **Hiroshima University, University of Occupational and Environmental Health, the Johns Hopkins University, Hyogo Emergency Medical Centre,Kibi International University, Ministry of Health Mozambique, Japan DMAT Secretariat, and the WHO Emergency Medical Team (2020-2021).** This project aims to establish a comprehensive evidence-based understanding of health data collection systems during and following emergencies and disasters through examining facilitators and barriers to implementation of standardized health data collection systems by conducting systematic review and case studies on the lessons learnt from disaster responses in Mozambique and Japan. The initial research brief is available at WKC website.

In the context of COVID-19 pandemic, the **2nd TPRN Core Group Meeting is to be held online in September 2020** and discuss the needed modification of the TPRN activity plan and operational plan. There is a need to establish an up-to-date database of Health EDRM knowledge and evidence. WKC also facilitates and contributed to the publication on Health EDRM in the context of COVID-19. WKC conducted an online survey for TPRN participants and Core Group members to identify key Health EDRM research needs in the context of COVID-19. Based on the results of the survey, WKC published a call for proposals in 2020 focusing **on key research needs to strengthen emergency preparedness in the context of the COVID-19 pandemic.** The focus was four major research areas that advanced policies and programmes promoting:

- An all-hazards health emergency and disaster risk management approach, including prevention, preparedness and readiness, for the risks related to emergencies that may occur during the COVID-19 pandemic.
- Governance mechanisms and a whole-of-society approach to managing the risks related to the COVID-19 pandemic and other health emergencies.
- Community resilience before, during and after the COVID-19 pandemic.
- Mental health problems in the Kansai region, Japan.

Some XX applications were received under this global call from were received. In October 2020, all proposals underwent an initial screening for completeness of applications, and those that passed the screening will undergo technical review by internal and external experts. It is anticipated that at least four proposals will be selected, one for each of the four major research areas, to undertake research during 2020-22.

Publications

Books

WHO Guidance on Research Methods for Health EDRM: https://extranet.who.int/kobe_centre/en/project-details/GUIDANCE

Journal articles

1. Kayano R, Lin M, Shinozaki Y, Kim Y. Long-Term Mental Health Support After Natural Disasters: A Report From An Online Survey Among Japanese Experts. Under review by Internal Journal of Environmental Research and Public Health (IJERPH).

2. Chan EYY, Sham TST, Shahzada TS, Dubois C, Huang Z, Liu S, Hung KK, Tse SL, Kwok KO, Chung PH, Kayano R, Shaw R. Narrative Review on Health-EDRM Primary Prevention Measures for Vector-Borne Diseases. Int. J. Environ. Res. Public Health 2020, 17, 5981.

3. Chan EYY, Sham TST, Shahzada TS, Dubois C, Huang Z, Liu S, Hung KK, Tse SL, Kwok KO, Chung PH, Shaw R. Narrative Review on non-pharmaceutical behavioural measures for the prevention of COVID-19 (SARS-CoV-2) based on the Health-EDRM Framework. Under review by British Medical Bulletin.

4. Newnham EA, Dzidic PL, Mergelsberg E, Guragain B, Chan EYY, Kim Y, Learning J, Kayano R, Wright M, Kaththiriarachichi L, Kato H, Osawa T, Gibbs L. The Asia Pacific Disaster Mental Health Network: Setting a Health EDRM Mental Health Agenda. Under review by IJERPH.

WHO/WKC project briefs

*Report of the 1st TPRN Core Group Meeting***:** https://extranet.who.int/kobe_centre/en/project-details/TPRN

*Revised Operation plan of TPRN***:** https://extranet.who.int/kobe_centre/sites/default/files/TPRN_OperationPlan.pdf

Systematic Review and Implementation Research for Health Data Management (Health EDRM) Before, During and After Emergencies and Disasters: https://extranet.who.int/kobe_centre/en/project-details/h-edrm_area1

Determinants of long-term mental health outcomes after disasters and health emergencies: A systematic review and establishment of the Asia Pacific Disaster Mental Health Network: https://extranet.who.int/kobe_centre/en/project-details/h-edrm_area2

*A Scoping Review of the Impacts of Climate-related Disasters and Health Adaptation on Vulnerable Populations in China, Viet Nam and Indonesia***:** https://extranet.who.int/kobe_centre/en/project-details/h-edrm_area3

Health Workforce Development in Health EDRM: Literature Review, Case Studies and Expert Consultations: https://extranet.who.int/kobe_centre/en/project-details/h-edrm_area4

Call for proposals issued

Research on Health EDRM in the context of COVID-19 i. Call opened from 5 August to 28 September 2020. Selection was conducted in October 2020. XX proposals selected for external review.

Other activities

July 2019, Dr Ryoma Kayano **organized a workshop on Health EDRM at DwD-GCRF-UKADR-DRG-UKCDR International Conference 2019, Newcastle upon Tyne, UK**. Through this workshop he introduced TPRN and WKC's Health call for proposal 2019. Over 20 leading experts offered their contribution to the TPRN.

December 2019, Dr Ryoma Kayano had **a plenary speech on WKC's activities on Health EDRM and TPRN at Great Hanshin Awaji Earthquake 25-year Commemoration Forum on Disaster Risk Reduction Science, Kobe, Japan.**

February 2020, Dr Ryoma Kayano **organized a workshop on Health EDRM research, research methods and research network at the 25th Conference of Japanese Association of Disaster Medicine, Kobe, Japan**. Through this workshop the up to date research projects and findings in Japan were overviewed. The result of this workshop is being summarized into a journal paper to be submitted in October 2020.

March 2020, Dr Ryoma Kayano had **a keynote speech on COVID-19 and Health EDRM at The Asian Conference on Education & International Development (Online).**