

Making the most of practical experiences gained during past crises or disasters for improving mental health and psychosocial support in radiation emergencies

The OECD Nuclear Energy Agency (NEA), jointly with the World Health Organization (WHO), organised two interconnected web-based conferences to explore how the experience and lessons from non-nuclear crises, such as the COVID-19 pandemic, could help countries to improve Mental Health and Psychosocial Support (MHPSS) in the event of a nuclear or radiological emergency.

During these web events, held on 26 June and 10 July 2020, invited international experts shared their respective experiences, research findings and views on two main issues: 1) Mitigation of psychological impacts; and 2) Community engagement and resilience throughout the entire emergency cycle, from preparedness and response to recovery.

Balancing direct health risks against the indirect consequences of protective actions

Whatever the crisis or disaster, direct health consequences are caused by one or several primary stressors. Such circumstances trigger people's anxiety and worry about their health, family, and future. Implemented protective actions may act as secondary stressors that disrupt normal life, break down socio-economic networks, and increase mental health and psychosocial impacts. The damages resulting from this two-layer stressor impacting welfare have been commonly observed during past crises or disasters. Examples of this are the recent COVID-19 pandemic, natural or industrial disasters, and any of the past nuclear or radiological accidents. These commonalities provide reflections on how to utilise and leverage the existing WHO and Inter-Agency Standing Committee (IASC) guidelines and recommendations for managing mental health and psychosocial (MHPS) consequences of emergencies and disasters. Further, they demonstrate the added value of disaster risk reduction strategies, and globally suggest to scale and harmonise practices across non-nuclear and nuclear sectors and across countries.

- Mental health and psychosocial support is implemented via a multidisciplinary process of a multi-sectoral dimension. The all-hazards approach allows the incorporation of functional cross-sectoral links between various aspects of emergency impact on a society (e.g. health, environment, the economy, social and cultural aspects) whatever the emergency or crisis may be.
- Managing mental health and psychosocial impacts of emergencies is a cross-cutting issue through all types of emergencies, disasters, and conflicts. Radiological or nuclear emergency preparedness,

response, and recovery planners and managers should take this into consideration and seek close co-operation with stakeholders and response organisations dealing with non-nuclear emergencies, and use the existing approaches and tools.

- It is essential that staff and volunteers in response organisations are educated and trained in mental health and psychological support issues. Special focus for such education and training programmes should be placed on the multidisciplinary approach.
- Mental health effects and stressors differ between various population and age groups. These differences need to be better understood and quantified through assessments, and have to be integrated into preparedness, response and recovery plans. MHPSS should be accessible to all, without any kind of discrimination, especially towards the most vulnerable groups in the population.
- More research, with secured funding, involving experts from a wider range of disciplines (e.g. sociologist, cross-cultural experts including cultural psychologist) is needed to build evidence on the MHPSS intervention and preparedness operations.
- Risk and crisis communication is of paramount importance to mitigate mental health and psychosocial consequences of decision-making and requires special training for responders.
- Besides following global guidelines, international standards and good practice examples of MHPSS operation, each country should adjust their national and local plans and protocols based on the analysis of the regional and local cultural, social and economic environment.

Community engagement and resilience are basic concepts for practical approaches to integrating mental health and psychosocial impacts into decision-making

Community engagement, and more broadly speaking stakeholder involvement, is more and more considered as a key concept by policy makers to support decision-making process. Decision-making outcomes should be elaborated by establishing dialogue so that knowledge in all of the areas of concern is shared. As a result, decisions are taken based on multiple trade-offs that incorporate the views of all stakeholders affected (or potentially affected) by these decisions.

Care must be taken to ensure community leaders represent their wider communities and do not exacerbate existing social tensions. Research and practice provide evidence that community resilience is a complex combination of various features such as preexisting knowledge and level of education, community networks and their self-supporting activities, as well as all dimensions of well-being or what defines “normal life” (health, employment, economy, housing, livelihood, school, etc.).

Community engagement and resilience seem to be linked but more research is needed to clarify how. What types of preparedness activities are most effective? What evidence do we have that community engagement is strengthening resilience? Are there practical examples of community engagement helping to strengthen resilience, in particular regarding vulnerable groups? These issues were discussed by panelists, as illustrated by these selected examples:

- Community engagement is needed in every phases of the nuclear emergency cycle, especially during recovery where support of community efforts can be developed through risk evaluation and communication. The “Mushroom map” in the risk communication with residents of Kawauchi village (Fukushima prefecture, Japan) worked as a win-win approach where residents shared local knowledge on mushroom collection sites and dietary habits with experts. The experts in turn explained how to use the information to estimate the radioactive caesium-related consumption risk. By understanding their risks, anxiety and worries can be reduced in the community.

- In the recovery phase, experts’ interactions with smaller groups promoting a more individual approach has proven to be more efficient, learning the backgrounds of participants and engaging on that basis. For example, the WHO is targeting COVID-19 responders in communities to engage them by using illustrated guide to “doing what matters in time of stress”.
- To ensure education/information efficiency in a preparedness stage, there is a need to include a risk-based approach in the curriculum of schools and universities. This long-term education targets younger generations including younger children in the recovery areas. This is also recognised as the most efficient way to target mothers’ anxieties. “My hero is you”, a children storybook developed and adapted by IASC to engage different communities, is a good example of how to help children cope with COVID-19.
- To ensure consistency of messaging, international organisations, international experts and local experts need to be on the same page.
- Cohesion inside community networks may help people in making their decisions after a disaster by sharing experiences on how to deal with uncertainty. However, when facing collective concerns, anxieties of families and friends may impact personal risk estimates as a kind of “emotional contagion”.
- Psychological impacts vary according to many factors such as gender, age, individual job situations, housing, levels of activity, as well as availability of and access to social support. This underlines the importance of considering both individual and community-level circumstances, since the two levels exhibit a complex interplay.
- MHPSS guidance are to be adapted by feedback from the field to ensure that interventions are appropriate and effective, and recognise the interplay previously mentioned.
- The media, including social media, are likely to play an important role in risk perception. Giving the population a greater understanding of any radiological or nuclear hazard may change the risk perception and the ensuing social behaviours. This depends on various “mental-print” elements (e.g. cultural, traditional, risk history) and triggers the need to elaborate risk-communication messages tailored to the audience.
- It has been proven that mental health and psychosocial consequences can have long-lasting influences on those affected. Long-term intervention plans and related resources are needed for the next several years after a major disaster. This is the case nearly ten years after the Fukushima NPP accident, where various well-being issues still exist amongst evacuees and returnees. Clinical observed health problems, including psychological and mental health issues, continue to increase.



Source: Prof. N. Takamura, Nagasaki University

The expected evolution in a nutshell

From the recognition of mental health and psychosocial impacts....

Non-radiological health impacts of nuclear or radiological accidents affect both the individual and societal aspects of people's lives. These impacts often manifest themselves in the form of mental health and psycho-social consequences associated with medium- to long-term socio-economic disruptions. Such effects were reported after Hiroshima-Nagasaki, Three Mile Island, Chernobyl and Fukushima, and are well recognised by international organisations, including WHO, United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), International Commission on Radiological Protection (ICRP), International Atomic Energy Agency (IAEA) and NEA.

...to their mitigation in practice by developing practical approaches and tools to assist proper and unified decision making amongst emergency managers/professionals/workers. Decision making in nuclear or radiological emergencies needs to shift from a radiological protection-centered strategy to a more holistic view of health protection, including mental health and psychosocial support. This approach is more and more promoted by international organisations. Even though there is no one-size-fits-all-approach, a step forward would be to adopt a global generic operational framework addressing mental health and psychosocial needs at the international, national and local levels.



Source: Prof. N. Takamura, Nagasaki University

Invited speakers and discussants

Dick Clomen, Project Manager, Mental Health and Psychosocial Consequences of Armed Conflicts and Emergencies, International Federation of Red Cross and Red Crescent Societies (IFRC), Geneva, Switzerland.

Professor Robin Goodwin, Department of Psychology, Warwick University, UK.

Dr Fahmy Hanna, Technical Officer, Department of Mental Health and Substance Abuse, WHO, Geneva, Switzerland.

Professor Masaharu Maeda, Center for the Fukushima Health Management Survey, Department of Disaster Psychiatry, Fukushima Medical University, School of Medicine, Japan.

Patricia Milligan, Senior Technical Advisor, Office of Nuclear Security and Incident Response, Nuclear Regulatory Commission, United States.

Professor Deborah Oughton, Research Director, Centre for Environmental Radioactivity (CERAD), Norwegian University of Life Sciences, Oslo, Norway.

Professor Noboru Takamura, Professor and Chair, Department of Global Health, Medicine and Welfare, Atomic Bomb Disease Institute, Nagasaki University, Japan.

Samantha J. Watson, Senior Radiation Protection Scientist, Public Health England, UK.

Dr Wolfgang Weiss, Emergency Advisory Board, German Commission on Radiological Protection SSK, Germany (Retired).

Organisers

Dr Matthias Zähringer, NEA Committee on Radiological Protection and Public Health Expert Group on Non-Radiological Public Health Aspects of Radiation Emergency Planning and Response (EGNR) Chair, Head of Emergency Preparedness and Response Division, Federal Office for Radiation Protection (BfS), Germany.

Dr Jacqueline Garnier-Laplace, NEA, Scientific Secretary, EGNR; **Dr Christiane Pözl-Viol**, expert in the EGNR, Social Scientist, BfS, Germany, and all the EGNR members.

Dr Zhanat Carr, Radiation and Environmental Health Unit, Department of Public Health and Environment, World Health Organisation (WHO), Geneva, Switzerland.