Chapter 2.2 Measuring the Health Impacts of Disasters

Hello, I'm Ronald Law from the Health Emergency Management Bureau, Department of Health, Manila, Philippines and the College of Public Health, of the University of the Philippines.

I'm the author of the chapter on Measuring the Health Impacts of Disasters in *the WHO Guidance on Research Methods for Health Emergency and Disaster Risk Management*.

As a health emergency and disaster management practitioner and an academic, I cannot overemphasize the importance and relevance of measuring the health impacts of disasters. As they say, you cannot manage what you cannot measure. In public health generally, decision-making relies on epidemiology and the quality of the data and information gathered. It should be no different for disasters and so capacities for measuring their health impacts should be made an integral part of any health emergency and disaster risk management system.

Thus, in this chapter, I discuss key issues for the measurement of health impacts of disasters. I cover the rationale for measuring these, the different indicators that can be used to characterize health impacts and risks, and the systems and methodologies that can used to measure them, as well as some of the challenges and issues, and strategies to address these. The chapter provides an overview of indicators that can be used to describe the impacts of disasters, discussing common health indicators relevant to sudden-impact health impacts from natural hazards.

I use two case studies to concretely demonstrate the importance of measuring the health impacts of disasters and how measuring these impacts can guide response operations and inform strategies that are critical to reducing risks in emergencies and disasters. Both case studies highlight the need for surveillance systems to gather this information.

The first is on the Early Warning, Alert and Response System, or EWARS, in Bangladesh. It shows why the EWARS was developed specifically for humanitarian and emergency settings and designed to be used by at-risk communities to allow for the quick collection of field data, geographical details and information on affected populations. The second case study highlights the Surveillance in Post-Extreme Emergencies and Disasters, called SPEED for short, in the Philippines. This is also an EWARS that we developed to monitor consultations for health conditions in the aftermath of disasters that cause displacements of affected population. It uses web-based software that receives data via short messaging service and converts data into customizable reports to assess health trends.

The SPEED case study also provides a basis for a description of possible barriers to the effective implementation of surveillance systems and sound use of epidemiology to guide public health decision-making. This includes the need to measure disaster impacts on hospitals, laboratories, health infrastructure, equipment, lifelines like communications, networks and power, and personnel.

Finally, the fundamental issue of balancing the measurement of the health impacts of disasters with life-saving functions which take precedence, is also discussed; along with strategies to address and circumvent problems such as reverting to manual mode of operations, having international medical teams gather the needed data and seeking the help of partners in the reporting procedures.

To conclude this podcast, here are four key takeaways from the chapter:

First, measuring the health impacts of disasters at the health system, population and individual levels is critical to enabling appropriate and timely public health interventions in emergencies and disasters.

Second, various indicators should be measured to characterize health impacts and risks and because of this, relevant data should be collected and analysed so that it can inform actions before, during and after emergencies and disasters.

Third, it's crucial to build capacities for epidemiology, laboratory testing, public health surveillance and information management as part of health EDRM, because these provide the foundation for accurately measuring health impacts during emergencies and disasters.

And last, but not least, although the effects of emergencies and disasters may make measuring health impacts difficult, putting in place pre-disaster prevention and preparedness measures, operational readiness, back-up systems and contingency plans can prevent or overcome these obstacles.

Thanks for listening.