

2025

12.3 (wed.)

12:10
12:50

12:10-12:15

◆ Introduction

12:15-12:40

◆ Seminar
(Presentation)

12:40-12:50

◆ Q&A

Online
(Zoom)Scan here for
Registration ▶▶https://us02web.zoom.us/webinar/register/WN_CvQmjYVpQ9ytM4-cYYZ5AQ

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Seasonality in mortality and health under a changing climate - Navigating the dynamics

**Key Words**

Seasonality

Temperature

Mortality

Health

Climate change

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Dr. Lina Madaniyazi is an environmental epidemiologist specializing in the health effects of climate change, extreme temperatures, and air pollution. She holds a Ph.D. in Environmental Epidemiology from Queensland University of Technology in 2016, an M.Sc. in Environmental Epidemiology, and a Bachelor of Medicine, both from Peking University. She applies advanced statistical methods, including time-series and distributed lag models, to large-scale environmental health data. Her work includes key contributions to the Multi-Country Multi-City (MCC) project and the Japan Environment and Children's Study (JECS), with publications in *The Lancet Planetary Health* and *International Journal of Epidemiology*. Based at Nagasaki University's School of Tropical Medicine and Global Health, Dr. Madaniyazi leads nationally and internationally funded projects and co-directs the Joint Ph.D. Program with the London School of Hygiene & Tropical Medicine (LSHTM). Her recent recognitions include the Young Investigator Award from the International Society for Environmental Epidemiology (ISEE Asia & Western Pacific Chapter), Nagasaki University's Impact Paper Award, and Future Women Researchers' Award, and Outstanding Alumna of Peking University.

Seasonal variations in mortality are well-documented, with higher mortality typically observed in winter and lower in summer. This pattern reflects multiple contributing factors, including ambient temperature, infectious disease circulation, and population vulnerability. Our multi-country analysis found that temperature accounts for a substantial portion of this seasonal variation, particularly in temperate and continental regions. Under climate change scenarios, warming is projected to increase mortality during warm seasons while reducing it during cold seasons, although cold-season mortality is expected to remain high. In Japan, a projection study of emergency ambulance dispatches among older adults estimates a 15 percent increase in annual cases by the 2040s, along with a transition from a winter-dominated to a dual-peak seasonal pattern, with rising summer demand alongside sustained winter demand. These findings underscore the need for public health systems to prepare for increased service pressures and shifting seasonal health risks in a warming and aging society.