McGill | Department of Epidemiology, Biostatistics and Occupational Health

EPIDEMIOLOGY

SPECIAL EPIDEMIOLOGY SEMINAR

THE DEPARTMENT OF EPIDEMIOLOGY, BIOSTATISTICS AND OCCUPATIONAL HEALTH, - SEMINAR SERIES IS A SELF-APPROVED GROUP LEARNING ACTIVITY (SECTION 1) AS DEFINED BY THE MAINTENANCE OF CERTIFICATION PROGRAM OF THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA

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How Could the Sufficient-Cause Model Advance Our Understanding of Etiology?

THURSDAY, 10 MAY 2018 / 3:30 pm – 4:30 pm
Purvis Hall

1020, Pine Avenue West – Rm 24

ALL ARE WELCOME

ABSTRACT

Causality is a central issue in epidemiology, and the sufficient-cause model and the potential-outcome model have now become cornerstones for causal thinking in the discipline. In this presentation, I give an overview of the correspondence between these two models, which allows greater insight to facilitate use of each model in the appropriate contexts. In order to provide deeper insight into the nature of etiology, I take into account the potential completion time of each sufficient cause, which thoroughly clarifies the conceptual relations between excess, attributable, and etiologic fractions. This explication also clarifies the two types of etiologic fraction, i.e., accelerating etiologic proportion and total etiologic proportion. In so doing, I emphasize that time is an underlying notion in biomedical research. As the duality between the two models shows, the different approaches to causality provide complementary perspectives, and can be employed together to improve causal interpretations in biomedical research.

OBJECTIVES

1. To learn about the link between the sufficient-cause model and the potential-outcome model;

2. To understand subtle differences between accelerating etiologic proportion and total etiologic proportion;

3. To discuss that time is an underlying notion in biomedical research.

BIO

Dr. Etsuji Suzuki is Assistant Professor of Epidemiology at Okayama University, Japan. He also has an appointment as a Visiting Assistant Professor in the Department of Epidemiology at the Harvard T.H. Chan School of Public Health. He has aimed to improve epidemiologic and statistical theories with the goal of advancing our understanding of the causation in population health. In order to do so, he has focused on integrating mutually complementary causal models, clarifying the concept of errors in causal inference, and applying multilevel approaches to the study of population health. His research interests involve social determinants of health, and he has conducted applied and translational research on health inequalities, suicide, and social capital. As an occupational physician, his research also explores occupational or environmental health conditions, with the aim to promote workers' health.