

CCHE Seminar Series

Analysis of Competing Risks Data Using Multistate Transitional Models



Professor Rinku Sutradhar University of Toronto

Date: Friday, April 8th, 2016 Time: 10 AM – 12 PM Location: Health Sciences Building Room 100 (first floor)

Summary:

Time-to-event data under the presence of one or more competing risks often arise in health research. As the occurrence of any competing event naturally prevents the primary event from being experienced first, it is important to account for the competing events when estimating event risk over time. This seminar will provide an introduction on how to use multistate transitional models for examining competing risks data. Under the multistate model framework, we will focus on 2 main statistical quantities: instantaneous rate of event occurrence and risk of event occurrence. Based on these 2 quantities, we will learn how to answer common clinical questions such as: what is the risk of each event over time?, what is the association between characteristics and the rate of event occurrence?, and what is the association between characteristics and the risk of event occurrence. An example of a competing risks analysis using multistate models will also be provided using Ontario-wide data among women diagnosed with cancer.

Dr. Rinku Sutradhar is a Biostatistician-Scientist at ICES and an assistant professor at IHPME. Her research interests focus on the development of statistical methodology for the analysis of multistate and recurrent event data arising from various types of incomplete observational schemes. Over the past few years, she has been implementing these methods to examine longitudinal health services data among patients diagnosed with cancer.