



THE SASKATCHEWAN EPIDEMIOLOGY ASSOCIATION

24th ANNUAL FALL SYMPOSIUM WORKSHOP

“Balancing Innovative Data Science and Sociology in Chronic Disease Epidemiology”

WORKSHOP

Date: September 26, 2025

Time: 9 am – 4 pm

Location: Room 1B03, Health Sciences Building, University of Saskatchewan

Time Series Analysis in Epidemiology and Health Science

Time series data is prevalent in healthcare, where measurements are collected sequentially over time. Time series analysis is an indispensable tool in epidemiology and health science, enabling researchers to monitor disease trends, evaluate public health interventions, and predict health outcomes. This workshop will rigorously explore the importance and applications of time series analysis in the field of epidemiology and health science. This hands-on workshop will provide an overview of the fundamental concepts of time series analysis, including stationarity, autocorrelation, and seasonality. Participants will learn how to apply advanced models such as ARIMA, SARIMA, Exponential smoothing, Dynamic regression models, and machine learning techniques like Neural networks, Prophet model to real-world health data. Using R, the workshop will provide practical examples of cutting-edge time series analysis applied to epidemiological data, such as modeling disease outbreaks and predicting patient outcomes. While there is no expectation to know the R programming language, some experience with statistical software like SAS, Stata, or R is an asset. This workshop is designed for researchers, data scientists, and health professionals who are eager to leverage time series data for impactful insights and decision-making.

Lunch and coffee breaks provided. Participants will be sent material before the workshop. This may include program material to be downloaded in advance. Each participant is encouraged to bring a computer; however, computer sharing is also possible.

Register online at: <https://www.eventbrite.ca/e/balancing-innovative-data-science-sociology-in-disease-epidemiology-tickets-1482052842949>

Meet the Facilitator



Dr. Erfanul Hoque, MSc, PhD, Assistant Professor of Biostatistics and Data Science, Department of Community Health & Epidemiology, College of Medicine, University of Saskatchewan.

Erfan Hoque is an Assistant Professor of Biostatistics and Data Science in the Department of Community Health & Epidemiology at the University of Saskatchewan. He holds a PhD in Statistics from the University of Manitoba, where he received the Outstanding Academic Performance by a Ph.D. Student Award for his research contributions.

He specializes in biostatistics, with expertise in longitudinal data analysis, time series analysis, statistical machine learning, dynamic data science, copulas and missing data analysis. His research interests focus on methodological developments in dependence modeling for multivariate data, with an emphasis on developing innovative statistical/biostatistical models and methods for complex and correlated data to address health issues related to communicable and non-communicable diseases. He is also engaged in interdisciplinary areas such as public health and medicine, genomics, computational finance, transportation, electricity demand, and supply chain management. In his spare time, he enjoys playing cricket and football and spending time with family and friends.

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