

Workshop on Fundamentals of Biostatistics and Epidemiology

2025 International Conference and Workshop on Modeling and Simulation of Complex Systems

July 23 – 25, 2025

Workshop Learning Objectives

At the end of this workshop, participants will be able to

- explain basic statistical concepts and terminologies used in statistics and health sciences
- define research hypotheses, determine the appropriate research design, and evaluate evidence in support or against hypotheses
- evaluate the basic assumptions underlying common biostatistical tests used in health sciences research
- Identify which type of regression models should be utilized depending on the nature of the data at hand and the actual research questions to be answered
- determine the appropriate model-building strategies that should be used
- correctly interpret analysis results obtained from statistical software packages

Workshop Prerequisites

- Required knowledge level: introductory knowledge of research and descriptive analyses
- Register for the 2025 ICAWMSCS conference
- Prior to the conference day, you will receive workshop materials (videos, instructions on how to download R, example dataset, R codes, and workshop slide deck). Ensure that you:
 - review the recorded videos titled “*Gentle Introduction to R*” before the workshop day.
 - download R software on your personal computer prior to the first day of the conference.
 - Practice uploading data into R as described in the video.

Workshop Facilitators

Tolu Sajobi, PhD PStat

Prof Tolu Sajobi is a Professor of Biostatistics, Epidemiology, and Clinical Neurosciences in the Cumming School of Medicine at the University of Calgary, Calgary, Canada. His research interest includes measurement and analysis of behavioral and patient-reported outcomes, design and analysis of randomized clinical trials, and classification and prediction methodologies for designing clinical decision support systems. As a medical statistician and research scientist, Prof Sajobi provides statistical leadership, analytic support, data advisory, and consulting services to various research groups in academia and industry organizations.

Olayinka Arimoro, B.Ed, MSc

Mr. Olayinka Arimoro is a doctoral student in Biostatistics at the Cumming School of Medicine, University of Calgary, Canada. His doctoral research investigates unsupervised machine learning and latent variable models for evaluating heterogeneity in patient-reported outcome measures (PROMs). He has nearly a decade long experience in teaching at undergraduate and postgraduate level, including serving a guided project instructor for Coursera Guided Project Network with over 40 courses and 100,000+ learners.