

Accounting for dropout when estimating the force of infection and rate of recovery for respiratory syncytial virus (RSV) disease affecting infants along the Kenyan coast

Abstract

In this talk I will present an approach for estimating the force of infection and the recovery rate or the per-capita loss of infection for the RSV disease based on repeated measurements or longitudinal binary data where observation time intervals within and between individuals and the number of observations per individual are not all equal. The problem of incomplete data will be addressed and methods of how we dealt with it applied and compared. The talk includes work already in Mwambi et al. (2008) where direct likelihood and generalized linear modelling are applied in estimating the two disease parameters. The findings of our approach are comparable to estimates independently derived by White et al. (2003) using Bayesian MCMC modelling via WinBUGs. Further extensions to the current approach will also be highlighted.