

ESTIMATING EQUATION METHODS FOR TWO-PHASE STUDIES

Alan Lee, Alastair Scott and Chris Wild

The University of Auckland

Existing efficient methods for fitting regression models to data from two-phase sampling designs can handle second-phase data on an arbitrary number of explanatory variables but, at best, they can only handle all-individuals data on one or perhaps two continuous explanatory variables. For many, and probably most, potential applications this is the wrong way around. We discuss some estimating equation methods which are showing real promise for problems with all-individuals data on several continuous explanatory variables. The main focus of the talk will be on fitting linear models for a continuous outcome variable though there will also be discussion of logistic regression where the problems are much more difficult.