Title:

Combined Weighting and Analysis of Multiple Longitudinal Surveys.

Abstract:

The Dynamic Analyses to Optimize Ageing (DYNOPTA) project seeks to draw together nine Australian Longitudinal Studies of Ageing (LSAs) to create enhanced longitudinal data sets in order to identify factors capable of reducing ageing related morbidity – to increase years of engaged and successful ageing.

The studies use a variety of survey designs and differ in their geographic and demographic coverage. Some surveys are results of simple random samples, for others stratified, or cluster designs were used. Three of the studies are national studies, 5 studies are city metropolitan city based studies, including one each in Sydney, Melbourne and Adelaide, and two in Canberra, and a small study in the Blue Mountains west of Sydney. The demographic coverage also differs between studies. Three of the studies have already developed weights to be used in calculating estimates from the sample that refer to the population represented by the survey. The remaining surveys do not have such weights. To use two or more of the studies in an analysis estimation weights are being developed for DYNOPTA. These weights will reflect the different sample sizes and selection probabilities of the studies and ensure that the different studies are appropriately combined when they cover the same geographical and demographic subpopulations. Other complexities of the design will also have to accounted for in analyses and any study effects identified and adjustments made. This talk will cover the statistical issues that this project raises and indicate possible approaches.