How to design generic stated preference choice experiments for the MNL model

Presenters: Leonie Burgess, Senior Research Associate, Centre for Health Economics Research and Evaluation, University of Technology, Sydney; Deborah Street, Professor of Statistics, University of Technology, Sydney; Rosalie Viney, Associate Professor, Centre for Health Economics Research and Evaluation, University of Technology, Sydney.

Leonie Burgess and Deborah Street have published extensively on the construction of optimal designs for generic stated preference choice experiments for the MNL model. Their work has appeared in various statistical journals and a textbook outlining their results is to be published by Wiley early in 2007. They have worked on projects in the health area and in marketing. Rosalie Viney has been involved in the design of several discrete choice experiments in health economics, including for analysis of valuations of health states and preferences for prostate cancer treatment, cervical cancer screening and immunization. She is currently leading a study comparing standard methods and DCEs for estimating QALY weights.

Abstract: Stated preference data, elicited through some form of survey designed to simulate market choices, are used extensively in health economics. Typically each respondent is presented with a number of hypothetical choice sets, or scenarios, and asked to choose one option from each of the choice sets. The approach involves the description of goods or services in terms of underlying attributes, the use of experimental design methods to develop the choice sets, and the use of statistical models to determine the contribution of each attribute to preferences. The number of scenarios formed by the combination of attributes at different levels is potentially large, and the grouping of these scenarios into choice sets is critical to being able to estimate the effects of interest. Thus experimental design is used to determine the best grouping to use, and provides a way to compare competing designs theoretically.

The applications of this approach in health economics have tended to rely on small fractional factorial designs, generated with commercial software design packages, and in which scenarios are then grouped in ad hoc ways. This workshop will provide an introduction to a systematic method for the determination of choice sets which are optimal, or near-optimal, for the estimation for the effects of interest. The consequences on the designs of needing to estimate main effects only, and of using non-orthogonal and unbalanced designs will be discussed.

Software that can be used to implement the constructions will be demonstrated at the workshop and can be used by participants with a laptop.

Who should attend: Those people with some familiarity with the use of discrete choice methods who wish to develop further their understanding and enhance their skills in this field.