process was defined as the state function of some system whose state at a future time can be probabilistically predicted from its present state, in a way that cannot be improved by taking account of previous states—known as the Markov property. Nowadays, many economic models use the Markov technique and are limited by its property. The correctness of this approach is questionable, as will be addressed in the workshop. In an attempt to adhere to a well-known technique, many researchers tend to ignore the memory component inherent to the disease. Although this major simplification makes the development and computation of these models easier, it often departs substantially from reality. Others circumvent the consequences of the core philosophy behind the technique and simulate memory by creating tunnel states. This only provides a partial, suboptimal solution, however. We feel researchers should urgently shift their focus to other modeling approaches better suited to the specific research question. Although more complicated, the development of memory-based models is clearly feasible with today's computer capabilities, as we will illustrate based on our own experience.

WMM2

ECONOMIC EVALUATION OF PROSPECTIVE MULTINATIONAL CLINICAL TRIALS: A MODELING APPROACH

Hux M[1], Weinstein M[1,2], Torrance G[1,3]
[1]Innovus Research Inc., Burlington, ON, Canada; [2]Harvard School of Public Health, Boston MA, USA; [3]McMaster University, Hamilton, ON, Canada

WORKSHOP OBJECTIVE: A modeling approach to the use of data from a multinational clinical trial for economic evaluation of a new product in a specific participating country is described. Treatment effectiveness is estimated based on efficacy data using all participating countries. Costs to a relevant healthcare perspective and to society are modeled based on clinical response to treatment combined with health resource use in the specific country of interest. Costs for patients dropping off study treatment may be estimated from other sources and used in the model for a more comprehensive estimate of total costs and consequences.
PARTICIPANTS WHO WOULD BENEFIT: Researchers involved with the design or conduct of economic evaluations related to prospective clinical trials.

In many countries, economic evaluation of new products is required or has come to be expected by regulatory and clinical audiences rapidly after product launch. Multinational clinical trials powered to estimate efficacy and safety against a standard treatment using data from all countries combined have become common in phase III of the drug development process. Many researchers are using this valuable opportunity to collect high quality RCT data on health resource use, quality of life and patient preferences. In contrast to efficacy and safety information, it may not be possible to directly combine health resource use from several countries due to between-country differences in healthcare systems, treatment practice patterns, and healthcare seeking behavior. We describe the use of a decision tree model to structure the evaluation with estimates of treatment efficacy, safety, and resource use collected from the clinical trial.

WMS1

ESTIMATING MEDICAL COSTS FROM INCOMPLETE FOLLOW-UP DATA

Polsky D, Glick H
University of Pennsylvania, Philadelphia, PA, USA

WORKSHOP OBJECTIVE: The purpose of this workshop will be to develop skills in the analysis of cost data at the patient level when incomplete follow-up or dropouts result in censored cost data. We will identify the conditions when univariate summary data are unbiased as well as the conditions when various multivariate techniques using regression analysis and survival analysis are required for unbiased estimates.
PARTICIPANTS WHO WOULD BENEFIT: Researchers and analysts involved in the methodological and analytic aspects of pharmacoeconomic studies as well as those who want to increase their understanding of the literature of economic evaluation in clinical trials.

As treatment costs are increasingly determined from individual level cost data, analysts have become increasingly aware of the difficulty in characterizing medical costs for all individuals for comparable durations of time. It is common for data on resource use and/or costs not to cover the entire duration of the study. This may be due to the final design (e.g., rolling admission and a fixed stopping date), limited commitment to the collection of economic data, or individuals dropping out of the economic study or the administrative database. Different models for analyzing costs should be used depending on the answers to the following questions: Are the dropouts concentrated among the most severe patients? Are the reasons for dropouts related to the treatment drug? Could the dropouts be related to some unmeasured phenomenon that is correlated with costs? Is death a possibility among the dropouts? Practical guidance will be provided for applying the appropriate methods by critically reviewing the statistical models for addressing these issues using a resent AIDS trial as an example.

WMD1

DATA COLLECTION METHODS FOR RESOURCE UTILIZATION: CHOOSING THE RIGHT APPROACH

Crawford B, Evans C
MAPI Values, Boston, MA, USA

WORKSHOP OBJECTIVE: The purpose of this workshop will be to develop a deeper understanding of vari-