programming language, using a 3-dimensional transition matrix, where the third dimension represents time spent in the current state. The ability of R to manipulate n-dimensional numeric arrays allowed the complex model to be easily implemented. RESULTS: The use of a semi-Markov process to model cost-effectiveness in epilepsy allowed the reported natural history of the condition to be accurately reflected. This was achieved efficiently and transparently using the R statistical programming language. Furthermore, the alternative (and commonly used) assumption of fixed transition probabilities with respect to time generated important differences in cost-effectiveness results compared to the semi-Markov process. CONCLUSIONS: Semi-Markov process models may be useful in modeling a wide range of treatment processes. By adding further dimensions to the transition matrix, the transition probabilities could be made dependent on other aspects of patients’ history providing a useful alternative to discrete event simulation, where increased speed of execution will aid probabilistic modeling.

**PMD34**

**ANALYTIC CHOICES IN ECONOMIC MODELS OF TREATMENTS FOR RHEUMATOID ARTHRITIS: WHAT MAKES A DIFFERENCE?**

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OBJECTIVES: To compare the analytic judgements, data and assumptions of different models used in the economic evaluation of infliximab, one of a new class of drugs for rheumatoid arthritis (RA). The purpose was to understand why different models give such varying results. METHODS: A detailed assessment was made of three models, one submitted (in a reimbursement dossier) by the manufacturer, one produced by an independent academic group and one published in the literature. Factors considered included the key data inputs, assumptions about the sequencing of treatments for RA, the estimation of cost offsets and the modelling of the maintenance of treatment effect for patients continuing or discontinuing infliximab. RESULTS: Two of the models, although embodying different methodological approaches, gave fairly similar results (approximately £30,000–£40,000 cost per additional quality-adjusted life-year gained). The third model, by the independent academic group, gave much higher estimates, around £100,000 per QALY. The differences were mainly because of the assumptions about the positioning of infliximab in the treatment sequence and assumptions about the long-term effect of therapy. CONCLUSIONS: Economic models of treatments for rheumatoid arthritis incorporate several key analytic judgements, which can have major impacts on cost-effectiveness. Two of the three models examined gave similar results, which suggests that consensus can be reached on several of the main methodological issues.

**PMD35**

**A METHODOLOGICAL APPROACH TO ASSESS COST DUE TO DYING IN THE CONTEXT OF DECISION ANALYTIC MODELLING**

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OBJECTIVES: Decision analytic models relate health outcomes in a specific health state with the costs arisen in this health state. In most of the decision analytic models we will find the option that people will die either due to a specific disease or due to other unspecified causes. Treatment costs in the last two years before dying are exceptionally high. Applying the health state costs to a patient who is dying will underestimate the true costs. Additional costs should be applied to correct for this potential bias. This will present a methodological and pragmatic approach to estimate costs due to dying of a disease specific cause and unspecified causes. METHODS: Age-specific and non age-specific costs were calculated. Dying of unspecified causes revealed to the most common causes for dying reflecting a background mortality. To assess the disease specific costs of dying—in our case for hepatitis C virus associated diseases; relevant causes of dying have been identified. Principle of all cost calculations was the combination of length of terminal hospital stay multiplied by per diem costs. RESULTS: Over the age of 15 years costs of dying are similar for disease-specific causes and unspecified causes with a range between £2.133 and £3.701. In the age group between 0 and 4 years costs for unspecified causes are about £7.645, in the age group between 5 and 14 years costs are £8.011. Hepatitis C Virus associated costs for both age groups are €19,987, respectively €13,018. CONCLUSIONS: The described pragmatical approach just considers additional costs in consequence of the last inpatient treatment before death. Therefore costs are still underestimated. Main advantage of the described approach will be the applicability to different decision analytic models.

**PMD36**

**ARE ISPOR SHORT COURSES A COST-EFFECTIVE WAY OF EDUCATING PARTICIPANTS AND ENHANCING MEETING ATTENDANCE?**

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OBJECTIVES: The purpose of this study was to determine whether short courses offered by ISPOR at its Annual Meeting are a cost-effective means of education and enhancing meeting attendance, or if the type, complexity, number, or duration of the courses should be changed. METHOD: Four different survey techniques