**PRM96**

MODELING UNCERTAIN FUTURE EVENTS IN COST-EFFECTIVENESS ANALYSIS

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**OBJECTIVES:** When the appropriate time horizon exceeds the evidence time horizon in a cost-effectiveness decision model, numerous uncertainties arise. One potential source of uncertainty is that of a possible future event that may affect one or more model parameters, e.g. a price shock or the emergence of a new comparator. These uncertain future events (UFES) are rarely accounted for in health technology assessment and there is a dearth of guidance regarding how they should be modelled. The objective of this study is to describe the circumstances under which UFES could meaningfully impact cost-effectiveness estimates and to present an example of appropriate modelling techniques using a motivating example.

**METHODS:** Drawing on examples from HTA and other relevant literature, a framework is proposed to outline: when to take explicit account of uncertain future events for the purposes of reimbursement decisions, how different future events may affect value-of-information analysis, and what modelling methods are likely to be useful when incorporating UFES. Taking as an example a decision model seeking to estimate the cost-effectiveness of an early interventional strategy for patients with non-ST-elevation acute coronary syndrome, a future price change is simulated and the framework is applied.

**RESULTS:** UFES are shown to impact ‘accept or reject’ reimbursement decisions on their own in very specific circumstances whereas their role in the value of information analysis is variable. The applied example shows that the reimbursement recommendation for future populations may change with the occurrence of the future event and that there is value in reducing the uncertainty regarding the nature of the future event.

**CONCLUSIONS:** UFES will only impact expected costs-effectiveness under specific and rare circumstances. When it is appropriate to include a future event in the model, the uncertainty surrounding its likelihood, timing and magnitude should also be quantified.

**PRM97**

TECHNICAL ERRORS IN COST-EFFECTIVENESS MODELS: EVIDENCE FROM THE SINGLE TECHNOLOGY APPRAISAL PROGRAMME IN ENGLAND AND WALES

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**OBJECTIVES:** Modelling for cost-effectiveness studies often relies upon the use of spreadsheets. However, research has shown that approximately 90% of spreadsheet models contain errors. Furthermore, cost-effectiveness models rely on an accurate transcription between many data sources, which increases the risk of errors further. The objective of this analysis was to ascertain the incidence of reported and potential cost-effectiveness model errors submitted to NICE as part of the Single Technology Assessment (STA) programme, which are subject to rigorous assessment by Evidence Review Groups (ERGs). The importance of probabilistic analysis within cost effectiveness models extends beyond quantifying the effects of parameter uncertainty. When treatment decision rules are dependent on patient attributes that are subject to variability (such as cost-effectiveness thresholds), it is important to accommodate this within the model to significantly bias predicted costs and QA.

**PRM98**

THERAPY ESCALATION THRESHOLDS AND THE POTENTIAL FOR BIASED COST EFFECTIVENESS ANALYSIS WHEN FAILING TO SAMPLE BASELINE HBA1C IN TYPE 2 DIABETES

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**OBJECTIVES:** When data for the type 2 diabetes mellitus (T2DM) is not previously been observed in studies of spreadsheet validity although this analysis of MTC as proposed by the DIA working group provides more robust analysis based on non-informative priors. In the case of informative priors, the most robust option was seen for equal total weight of clinical vs. observational data. Results of all meta-analyses appeared to be consistent across the model and prior specifications, even with low number of studies (<10). **CONCLUSIONS:** Bayesian evidence synthesis can leverage all available information in a robust manner for both direct and indirect comparisons, with fair quantification of uncertainty. Specific guidelines on MTC model parameterization for safety data could complement the current NICE guidelines.

**PRM101**

THE ROLE OF HALF-CYCLE CORRECTION IN THE MODELS USED FOR HEALTH TECHNOLOGY ASSESSMENT

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**OBJECTIVES:** To analyse the half-cycle correction and its effect on the final results of Markov models. METHODS: In our analysis we focus on the half-cycle correction, which is a method used to deal with the inaccuracy caused by inadequate cycle