PRM268
CAN ADVANCES IN HEALTH MONITORS LEAD TO HEALTH BEING LOOKED AT AS A COMMODITY?
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As advances in health monitors are being developed the opportunity for them to be integrated into daily healthcare infrastructure is also expanding. Many healthcare systems are facing increasing budgetary pressure and are finding it hard to make decisions about what treatments to cover. The willingness to pay a fair price for the benefits of healthcare is present; however, the current infrastructure and evaluation process has limitations. Patients can gain different benefits from the same treatments while also incurring the same cost. Drug evaluations are lengthy and complex processes, especially for ones that have multiple indications, sub-populations and formulations to consider. Market restrictions of having one price per brand often leads to access restrictions not allowing patients to benefit fully from the treatments available. Furthermore, costs for non-compliant patients and adverse events are also upheld by current healthcare systems meaning that the cost per benefits are not fully realized. Continuous monitoring of patients could pave the way forward for scalable, accurate and effective payment by result systems that will allow patient benefits to be directly linked to the cost of treatment. If monitors can accurately evaluate the amount of benefit each patient gains from treatment it can effectively remove the need for drug pricing as a whole, only a cost per unit of health would need to be established and healthcare systems would pay for the total benefits gained by the population, similar to how electricity is paid for using a meter. This change could allow drugs to enter markets with fewer restrictions and be used optimally by physicians where they feel they add the most benefit to patients. Furthermore, patient compliance and adverse events would become the financial responsibility of the drug provider, they will need to enforce monitoring, compliance and incentivize on-label use to provide the maximum patient benefits.

PRM269
A METHOD TO EVALUATE UNCERTAINTY DUE TO UNKNOWN PARAMETER CORRELATION IN STOCHASTIC DECISION MODELS
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OBJECTIVE: To present a method for evaluating uncertainty due to unknown parameter correlations in stochastic decision models. **METHODS:** The use of probabilistic sensitivity analysis (PSA) has grown significantly in health economic decision modeling. When parameter correlations are known various methods exist to evaluate uncertainty in PSAs to account for correlations (eg, Cholesky decomposition). However, in cohort analyses, using literature-based data, parameter correlations are seldom known and it is therefore typically assumed that parameters are uncorrelated and independent. We present a method and worked example to explore uncertainty due to parameter correlation in the absence of known correlations. For a decision model with n parameters a n x n diagonal correlation matrix defining all parameter correlations is developed. With the SIMTOOLS add-in, the CORAND function and correlation matrix are used to generate correlated random numbers for the model simulation. For the base case all parameters in the matrix are assumed to be independent and the correlations are set to zero. Systematic analyses can then be conducted in which model parameters, individually or in groups, are correlated to explore the potential impact of parameter correlation on the model outcomes. We report the results of a sample analysis and show that parameter correlations can have a significant impact on model uncertainty. While the median ICERs did not change significantly, the 95% confidence intervals ranged widely as the shape of the ICER-scatterplots changed. Parameters with little impact in deterministic sensitivity analyses were observed to contribute to significant uncertainty in the correlation analysis. **CONCLUSIONS:** In stochastic decision models where parameter correlations are unknown, it is possible to evaluate uncertainty due to potential parameter correlations in Excel-based decision models. Unknown parameter correlations may be a significant source of uncertainty. Future research is needed to validate this method in comparison to methods for evaluating known parameter correlations.

PRM270
PRACTICAL CONSIDERATIONS IN THE APPLICATION OF STATISTICAL METHODS FOR TREATMENT SWITCHING
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Treatment switching occurs in a clinical trial when control arm patients switch to experimental therapy during the study. This often happens in oncology trials where patients switch following disease progression, and can reduce the observed survival difference. An estimate of the survival effect without switching may be required for economic modelling, and several methods have been developed to estimate this. In 2014, the NICE Decision Support Unit published Technical Support Document (TSD) 16 to provide guidance on this. There are several practical considerations for the statistician or analyst wanting to apply these methods to clinical trials data. The analysis framework proposed in TSD16 is useful, but it can be difficult to apply retrospectively unless the trial was designed with this objective in mind. So are there any trial design features that should be included in the protocol at the start? The right data must be collected to enable the methods to be applied – what data is that, is it practical to collect it all, what should be done if not? Each method has strong underlying assumptions such as a constant treatment effect or no unmeasured confounders – how could those assumptions be assessed for viability? Several recent health technology assessments have tried to apply these methods and shown either very different results from different models, or have struggled to fit the models at all. Why might that be? What could the analyst do in this situation? Guidance will be provided on these issues based on experience of applying these methods to real-life data and a review of recent health technology assessments.

PRM271
EXPLORING THE USE OF VALUE OF INFORMATION METHODS TO PRIORITISE RESEARCH TO ADDRESS THE TREATMENT UNCERTAINTIES IDENTIFIED BY THE JAMES LIND ALLIANCE PRIORITY SETTING PARTNERSHIPS
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Economic analysis is regularly used to inform decisions on allocating healthcare budgets but not routinely for allocating health research budgets which may mean that the research budget is not delivering value for money. The study aims to use 'value of information' analysis to prioritise research funding across an entire clinical area. In particular, exploring the usefulness of such methods in prioritising the treatment uncertainties identified by the James Lind Alliance (JLA) Priority Setting Partnership (PSP) for atopic eczema. Whilst the research will primarily identify what the future research priorities within eczema should be, it will also act as a case study of how such methods could be applied to JLA PSPs for other conditions. The potential benefit of this research is in reducing the first two stages of research waste (i) 'Questions relevant to research users?' And (ii) 'Appropriate research design, conduct and analysis?' identified by Chalmers and Glasziou (2009). The methods proposed for doing the work will be described, with a focus on those stages already underway. This includes defining the decision problems, building on the work of the eczema JLA PSP, and conceptual modelling, understanding the disease process and service pathways for eczema with expert input. The potential usefulness and challenges of the approach will be discussed. Strengthening methods around research prioritisation and study design is important to ensure value for money from limited research funding. Reference: Chalmers I, Glasziou P. Avoidable waste in the production and reporting of research evidence. Lancet 2009; 374: 86-89

PRM272
USE OF A MULTI-DECISION CRITERIA ANALYSIS TO SUPPORT HEALTHCARE DECISION-MAKING FOR PRIVATE PAYERS IN BRAZIL: DEVELOPMENT OF A MODEL TO GUIDE REIMBURSEMENT DECISIONS
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OBJECTIVES: Although the use of cost-effectiveness analysis has been increasing in Brazil, there is no evidence of an appropriate willingness-to-pay value to interpret results. The objective of this study is to develop an alternative model to support reimbursement decisions of private payers in Brazil. **METHODS:** A value measurement Multi Decision Criteria Analysis (MCDA) model was developed in order to reflect different dimensions that influence healthcare decisions. A literature review was performed in order to identify the most common criteria and scores scales to be included in the model, which was further complemented by expert opinion. Analytical hierarchy process was used to weight the importance of each dimension by pairwise comparisons. A group representing different stakeholders (academia, payer, industry, health service provider and physician) was formed in order to consider different perspectives when validating the final model. **RESULTS:** A simple linear additive model with four dimensions (clinical impact, strength of the evidence, economic impact and feasibility of adoption) was developed based on the literature. After validation by expert opinion, these 4 dimensions were divided into a total of 10 criteria ("treatment costs", "indication prevalence", "level of evidence", "relevance of outcome", "impact on health", "severity of disease", "feasibility of adoption", "legal implications", "ethical implications" and "technology positioning"). Weights for each criterion were assigned, with disproportional values given to "legal implications" and "ethical implications", as these were considered mandatory requirements. The final score was then classified into 5 options based on the likelihood of recommendation. Univariate sensitivity analysis to the assigned weights was performed to check the robustness of the results. **CONCLUSIONS:** The proposed MCDA model may provide additional support to prioritize and guide reimbursement decisions for individual payers in the private Health System in Brazil.

PRM273
MODELLING TO DETERMINE THE PRICE AND IDENTIFY CRITICAL DATA GAPS DURING VACCINE DEVELOPMENT
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OBJECTIVES: A preliminary model was built early in the development pathway for a new vaccine. The vaccine had been studied in phase II trials but was yet to be tested in a phase III study. The twin objectives of the model was to determine the highest price for the vaccine where it remains cost effective and to identify which variables will most determine cost effectiveness. **METHODS:** A simple decision analytic model was built to determine the cost per QALY associated with the use of the vaccine in an elderly population. A literature search was undertaken to identify published evidence to populate the model. The model was run for a cohort equal to the total population in the countries for which the model was developed. This enabled the total budget requirement for a national vaccination program to be estimated. **RESULTS:** The model generated a price up to $600 per course of vaccine and with a cost per QALY of $US50,000. The main drivers of the cost effectiveness was the frequency; cost per episode of care for hospital addmissions, the incremental efficacy of the vaccine and mortally associated with the underlying infection. **CONCLUSIONS:** The model identified a number of areas which would be important for data collection, these are mostly related. It shows the value of early decision analytic modelling to determine the threshold price and the data gaps. This will help the organisation developing the vaccine to focus research on collecting information which will be useful when applications are being made for reimbursement of the vaccine in the future.

PRM274
HOW INSURANCE CLAIM DATA CAN HELP IN HEALTH OUTCOMES RESEARCH: AN INDIAN PERSPECTIVE
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