PMR25
CAN A MULTI-CRITERIA DECISION (MCD) OPTIMISATION MODEL HELP DECISION MAKERS IDENTIFY OPTIMAL VACCINE SEQUENCES WHEN EXPANDING THEIR UNIVERSAL MASS VACCINATION PROGRAMME? THE CASE OF POLAND

Objectives: The model aims to determine the optimal allocation of financial resources amongst various paediatric vaccines accounting for changes in budget and accessibility of new vaccines over time. The approach aims to inform decision makers who are seeking to extend their national immunisation programmes about the optimal mix of vaccines and sequence of their introduction, meanwhile accounting for their preferences in clinical outcomes.

Method: An MCD optimisation model was developed in Microsoft Excel that considered availability of new vaccines and budget changes over time, optimal mix of vaccines in previous years, budget investment time horizon, cumulative outcomes time horizon, and supported possible vaccination programmes.

Results: The model achieved a more comprehensive analysis than the existing methods, taking into account the vaccine's characteristics, budget constraints, and the user's preferences. The model provided recommendations on vaccination sequences, vaccine prioritisation, and budget allocation.

Conclusion: The use of an MCD optimisation model provides a tool to inform decision makers about the optimal allocation of financial resources over time.

PMR26
DON'T MAKE ME WAIT: THE VARIANCE REDUCTION TECHNIQUE FOR FASTER MONTE CARLO SIMULATIONS IN COST EFFECTIVENESS MODELS ON WEB

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Abstract: Systematic reviews aim to identify, select, synthesise and appraise all high-quality research relevant to a particular research question, and are widely accepted as the gold standard for providing the best evidence for use in decision making. They are essential, routine components of submission data packages for health technology assessments (HTAs) of products undergoing evaluation for reimbursement, access or rejection. Conceptually, systematic reviews are often the source for clinical evidence used in health economic modelling to evaluate cost-effectiveness. Thus, they represent a substantial investment of resources, and incorrect or incomplete reviews could invalidate the proposed clinical and economic value of a product set out in a health technology submission and result in unfavourable reimbursement decisions and/or delayed market access. There are a number of best practice criteria set down for systematic reviews; the most widely recognised being from the Cochrane, UK National Institute for Clinical Excellence (NICE), and the HTA-HTA review group to carry out its own review, which could potentially lead to confounding remain. Another potential bias is a possible "study effect" whereby other differences between studies distort the comparisons. This can be assessed using the reference groups of the trials, if these received the same treatment. The results have been used in HTA submissions, and it is likely that its use and that of other alternative techniques will increase particularly in areas with rapid drug development. In the presence of heterogeneity or incomplete evidence networks, STCs can provide comparative evidence where these may be otherwise deemed unavailable due to limitations of ITCTs/MTCs.

PMR28
SHOULD THERE BE AN OPTION TO "UNREFER" NICE SINGLE TECHNOLOGY APPRAISALS: CASE STUDY OF Aripiprazole for Bipolar I Disorder in ADOLESCENTS

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Abstract: Single technology appraisals (STAs) are a key component of the development of NICE technology appraisals guidance, but are a time and resource intensive process. Societal costs are incurred during STAs by holding the NICE Appraisal Committee, via payment to the evidence review group (ERG) and in the opportunity costs of other technologies which are not appraised. In addition, the drug manufacturer may incur substantial costs in preparation of their submission and throughout the STA process. The said technique has been applied to the published probabilistic decision tree-based Excel model for evaluating cost-effectiveness of breast cancer screening. In this model, different types of probability distributions can be chosen to model uncertainty of disease incidence, mortality rate and intervention effectiveness. Using the STAs as a case study, we propose the concept of potential STAs that may not be referred by NICE as a potential endpoint to achieve outcome with the same error while performing 50% less simulations as compared to the plain Monte Carlo method. This performance improvement is yet another step towards increasing user acceptance of web based health economic models with Monte Carlo simulations.