for Tiotropium seen in blinded trials. Our examples demonstrate the useful application of classical meta-analytic methods to assess heterogeneity across groups of trials based on aggregate data of relative treatment effect and its variability.

PMG280
VALUE-BASED PRICING SCHEME FOR NEW TECHNOLOGY IN CONSIDERATION OF COST-EFFECTIVENESS DOMINANCE TO THE CONTROL
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OBJECTIVES: This study aims to develop a theoretical scheme to achieve value-based pricing in consideration of the efficiency with respect to the cost-effectiveness ratio (ICER) of a new technology, compared to the best control. METHODOLOGY: Suppose that a pair of cost and benefit of a new technology, the best control and next best one is respectively represented as three points with X(Cx, Cs), X'(Cx', Cs') and S(Es, Cs) on the cost-effectiveness plane, assuming the inequalities Es < Es' < Ex and Cs < Cs' < Cx. Let X be a variable, while the other parameters all constant. Considering geometric relations between the three points, we identify the areas where point X should be located according to the categories: simple dominance, non-dominance and cost-dominance, in which we formulate the association between the expected cost Cx and the incremental cost-effectiveness ratio (ICER) of point X: (Cx - Cs)/(Ex - Es) compared to point S and (Cx - Cs')/(Ex - Es') to point S'. RESULTS: Three ranges for Cx were identified for each of the dominance categories, respectively, 1) lower than Cs', 2) between Cs' and Cm, and 3) greater than Cm, where Cm was estimated with the expression of (Es - Es')Cs - (Ex - Es)Cs'/(Es - Ex). The expected cost Cx was formulated as a linear function of the ICER: Cx = Cs + (Cx - Cs)/ ICERs-x in case of dominance, whether simple or extended, and Cx = Cm + (Cs - Cm)/ ICERs-x for non-dominance. Based on the formulae, the maximal cost accepted in each category was determined in theories and examples, with taking an ICER threshold into account.

PMG281
HTA STUDIES FOR MEDICAL DEVICES INCORPORATING THEIR MORA M AGING
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OBJECTIVES: Due to specificities of medical devices (short lifetime, learning curve, limited approval process, steady technological development, etc.), it is desirable to take account of moral aging in HTA studies focused on devices. However, methods that might be used to evaluate innovations that are brought by a new generation of instruments (and consider them in assessments of the older ones) are not well defined yet, although they are considered topical by many recent journal and conference papers. METHODOLOGY: The article consists of two parts. First, the history of innovations and their incorporation in HTA studies was studied for three typical devices (stents, MRI, left ventricular assist device – LVAD) with the focus on the delays in the particular analyses. Second, based on a literature review, a recommendation was formulated for assessment of devices in the case when innovations appear rapidly after each other. RESULTS: It is shown that older generations of devices are often being assessed when substantial innovations are already available, without taking them into consideration probably difficultly. Cost-effectiveness acceptability curve (CEA) risk of the selected: MCDAs applied on the effect side of the CEA (a modification of the method suggested by Rosina et al., Léka 4(3), 2014, 23-36, and the headroom method of Buerger et al., Medical Decision Making 13(4), 2007, 263-71). Their application is illustrated in the case of LVAD. CONCLUSION: The current methodologies for medical device assessment do not consider their moral ageing and/or innovations. The headroom method and/or MCDAs may be a partial solution, as this paper suggests. Further more extensive studies are necessary in this direction.

PMG282
CLINICAL MULTI-CRITERIA DECISION ASSESSMENT (CMDA): A PROPOSAL FOR APPLYING MCDMA TO COMPARE TREATMENTS IN A SIMULTANEOUS, TRANSPARENT AND OVERALL WAY
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There are plenty of different clinical and economic parameters to consider in order to choose the best treatments. RCT and consequent Mixed Treatment Comparison (MTC) are based on the assumption of a single criterion, i.e. to compare biologicals in rheumatoid arthritis. Like for the general framework of MCDA, in CMDA there is not one predominant criterion, the innovative approach is to consider a “clinical consensus” for the selection of all relevant criteria (domains) and related parameters for each technology (Pt361–362) and the following aggregation of specific weights. This means that clinical outcome measured on a specific endpoint (parameters) will be weighted according to the importance that a clinical consensus will give to the specific domain. The experimental cost-effectiveness analysis is then a combination of both clinical and objective evaluation. Results from both meta-analysis and observational studies are used by a clinical consensus after attributing weights to specific domains and related parameters. Decision will result from a related comparison of all parameters (i.e. efficacy, safety). The match will yield a score based on the evaluations that link the treatment with a specific intervention, and then a final score for each treatment. The higher is the final score, the more appropriate is the intervention to treat disease considering all criteria (domain and parameters). The results allow physicians evaluate best clinical treatment considering at the same time all relevant criteria.

PMG284
APPLICATION AND TREATMENT OF MISSING DATA IN REAL WORLD RESEARCH
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PURPOSE: The objective of this presentation is to bring awareness to the challenges of missing data from study design and analysis perspectives, and to discuss study design elements and analysis methods that support meaningful and valid inferences in both prospective and retrospective observational research used to generate real-world evidence for payers and health technology assessment authorities. DESCRIPTION: Observational studies are increasingly used to study the post approval drug exposure population for drug and medical effectiveness and safety assessments. Understanding the potential sources of missing data from a study whose design imposes structure on data collection allows one to design methods that may help reduce the magnitude of missing data. Given the occurrence of missing data, analysis methods that support valid and meaningful conclusions from observational research are necessary. This presentation starts with an overview of the potential sources of missing data in observational research, including PRO assessments and retrospective clinical data; then focuses on proactive planning of data collection and analysis. The types of missing data (missing due to study withdrawal, directly reported as missing; non-reported, uninterpretable value, out of range value) and statistical approaches for handling missing data including examining missing data patterns and testing missingness mechanisms, effective and advanced analytic methods (imputation, likelihood based and weighted approaches), when these methods should be applied and the impact of missing data to the interpretation of study findings will be discussed. The concepts and methods will be explained with the use of real-world observational study data, including patient registries, electronic medical records, patient charts, and claims data.

PMG285
SUGAMAXED: THE RIGHT OPTION FOR THE EFFICIENCY OF THE OPERATING ROOM? A METHODOLOGY FOR COST / BENEFIT ANALYSIS IN COMPARISON TO THE ROUTINE CHOICE FOR REVERSAL
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BACKGROUND: In face to the financial environment in which health facilities currently are evolving, it is now clear and shared that only through a good organization of the clinical Biomedical interventions can achieve a significant improvement of the quality of care. In this way the economic impact becomes inversely proportional because the establishment of the virtuous circle that leads (or at least should lead) to a adequate request of resources that are used in a so much appropriate way to obtain the most practical benefit that ultimately produces case-mixes with high profitability, a good level of quality perceived as high and expenses pragmatically supported by the revenues. ENDPOINTS: The primary endpoint of this study aims to assess starting data and the information is analyzed allow to accurately calculate, the increased efficiency achieved by the availability to the anesthesiologist of sugammadex rather than its unavailability. Moreover, the secondary endpoint is to assess the costs of the operating theatre from the management control system of the hospital. The revenues come from the clinical medical records.

DISEASE- SPECIFIC STUDIES

INDIVIDUAL’S HEALTH – Clinical Outcomes Studies

PHI
A COST-EFFECTIVENESS ANALYSIS OF HOSPITAL PHARMACIST REVIEW IN OLDER PATIENTS
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OBJECTIVES: A recent cluster randomised controlled trial (RCT) conducted in an Irish hospital evaluating a structured pharmacist review of medication (SPR) supported by computerised decision support software (CDSS) demonstrated positive outcomes in terms of reduction of adverse drug reactions (ADR). The aim of this study was to examine the cost-effectiveness of pharmacists applying a SPR in conjunction with CDSS to older hospitalised patients compared to usual pharmacutical care. METHODOLOGY: Cost-effectiveness analysis alongside a cluster RCT. The trial was conducted in a tertiary hospital in the south of Ireland. The intervention arm patients received an additional pharmacist review of medication (including reconciliation, deployment of CDSS and generation of pharmaceutical care plan for patient. Control arm patients (n=576) received usual care from the hospital pharmacist. The incremental cost-effectiveness analysis was examined in terms of the healthcare system and an outcome measure of ADRs during an inpatient hospital stay. Uncertainty in the analysis was explored using a cost-effectiveness acceptability curve (CEAC). RESULTS: On average, the intervention arm was the dominant strategy with regards to the clinical and cost-effectiveness. Compared to standard care (control), the intervention was associated with a decrease of €815 (95% Confidence intervals CI -3451, 1820) (p = 0.544) in mean healthcare cost and a decrease in the mean number of ADR events per patient of -0.064 (95% CI -0.125, 0.008) (p = 0.081). The probability of the intervention being cost-effective at a respective threshold values of 0, €50, €500,