efficacy and safety profiles for published data on antidepressants fluoxetine and venlafaxine with rivastigmine. The is compared to the standard SMDA results. RESULTS: The results showed that, with a non-informative Dirichlet prior, the posterior mean weights for given rankings were similar to the central weight vectors of the standard SMDA, so that were some other comparable measures such as the rank acceptability index to make meaningful comparisons. CONCLUSIONS: The Bayesian SMDA has a number of advantages inherited from Bayesian decision analysis. The Bayesian estimates for key SMDA measures are similar to those of the standard SMDA. But it offers more options and flexibilities than the standard SMDA, and its implementation is easier.

PRM26 MULTIVARIATE NETWORK META-ANALYSIS: AN EXAMPLE IN TYPE 2 DIABETES FOR THE ANALYSIS OF GLYCAEMIC CONTROL

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OBJECTIVES: The objective was to conduct a Bayesian multivariate network meta-analysis (NMA) to take into account the correlation between three outcome measures assessing glycaemic control for the monotherapy treatments of type 2 diabetes mellitus (T2DM). METHODS: A systematic literature review was conducted to identify relevant randomised clinical trials. The efficacy of T2DM treatments on glycaemic control was compared to the estimates from different costing methods and assess their impacts.

RESULTS: A total of 40 studies were included in the analysis, all of them reported results in terms of HbA1c from baseline, 36 for FPG and 22 for the proportion of patients reaching HbA1c < 7%. Results for the analysis of glycaemic control from the multivariate NMA were overall consistent with the three univariate NMA in terms of ranking of treatments based on the SU CRA and point estimates were comparable. Using the multivariate NMA, results for the three primary endpoints reaching HbA1c < 7% were statistically similar to the univariate NMA results. CONCLUSIONS: This multivariate network meta-analysis of treatments in T2DM provided more precise estimates than separate univariate NMAs on glycaemic control. It enabled estimations of treatment effect for all comparators on all endpoints of interest including the ones for which data were not publicly available.

PRM27 A NOVEL ITC APPROACH: MATCHING PATIENT-LEVEL DATA TO STUDY-LEVEL SUMMARY MEANS AND VARIANCES

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OBJECTIVES: Indirect Treatment Comparisons (ITC) are used to contrast the effectiveness of different treatments and to make decisions in the absence of head-to-head information. However, these indirect comparisons are less effective in situations where baseline patient characteristics (e.g. age, disease duration) differ between studies. Any clinically meaningful variation in these characteristics between studies could be adjusted in ITC to reduce the bias in estimates in arrive at less biased estimates of the treatment differences. At present, many ITCs use a comparison of a sponsor’s Individual Patient Data (IPD) with study-level summary statistics. This approach involves using different methods currently exist which allow for the matching between studies of the baseline characteristics means, but crucially not their variances. METHODS: We outline a novel matching method which allows for the matching of both mean and variance of multiple baseline patient characteristics. Our method involves fitting higher-order polynomials separately to each of the baseline parameters with the aim of estimating a single weight for each individual patient. The weighted means and variances of the IPD are then compared with the study-level summary level data. Simulation is used in order to arrive at the combination of polynomial functions which give the ‘best fit’. RESULTS: The method is highlighted with a case study of anti-VEGF therapies in the treatment of visual impairment due to diabetic macular edema. Our proposed method successfully matches both the means and variances across three important predictors of post-baseline changes in visual acuity. CONCLUSIONS: The ability to match IPD variability with study-level summary variability is critical in order to accurately estimate the statistical significance of treatment differences. To our knowledge, current comparative effectiveness methods fail to do so – our novel approach provides a possible solution to this problem.

RESEARCH ON METHODS – Cost Methods

PRM28 COMPARISON OF DIFFERENT COSTING METHODS

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OBJECTIVES: Cost analysis is an essential component of health economic evaluation. However, cost data are often incomplete due to loss of follow-up or administrative termination. Ignoring censored data could lead to biased cost results. Over the decades, many statistical methods for censored cost data have been proposed. In this study, we compared the efficiency and economics of using Rv with CF in terms of fat grafting and operating costs. Processing in a single unit offers a simple, more efficient system. This study compared the efficiency and economics of using Rv with CF in terms of fat grafting and operating costs.
per minute for basic surgical procedure, excluding physician costs) were used to estimate outcomes. A sensitivity analysis was undertaken to identify any studies reporting adverse event risk due to mOCS treatment. Seventy-two (72) studies were identified. The review focussed on eight disease outcomes representing the bulk of the mOCS cost and QALY burden: type 2 diabetes, myocardial infarction, pneumonia, severe exacerbations of asthma, psychotic, anxiety, depression, and stroke. A risk assessment for each adverse event was conducted, based on the daily dose and mOCS exposure that best represented asthma-related mOCS use in Australian clinical practice. The excess risk of complications in patients receiving mOCS, relative to those patients not receiving mOCS, was applied to the annual cost and QALY burden of each event in the Australian population. The cost and QALY burden attributable to mOCS was estimated on a per patient per year basis. RESULTS: The expected annual cost and malaria-related disease outcomes was estimated to be $12,968 per patient per year. Each patient treated with mOCs also suffers a QALY loss of 0.0367 per year of treatment. These effects are considered reversible once patients stop taking mOCs. CONCLUSIONS: Quality of life, cost and QALYs are associated with a cost burden for patients with severe asthma which is likely underestimated by the approach adopted in this study. These results are likely to be useful for economic evaluations of new asthma interventions which replace or delay mOCs.

PRM36
INCLUDING HUMAN RESOURCE CONSTRAINTS IN HEALTH ECONOMIC EVALUATIONS
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OBJECTIVES: Health economic evaluations mostly present decision makers results without taking into account the importance of human resource constraints. This might influence the use of resources and consequently the results of human resource constraints have been recently raised as a constraint that is of particular importance, especially in low and middle income countries. This review article aims to evaluate the extent to which human resource constraints are taken into account in health economic evaluations. METHODS: We conducted systematic literature review via 7 electronic databases and then consulted some experts for additional relevant articles. We searched for articles that investigated the impact of human resource constraints on human resource constraints. Subsequently, these articles were classified based on what extent they addressed human resource constraints. We distinguished the categories ‘ignoring’, ‘dealing’ and ‘relaxing’ human resource constraints. Furthermore, we classified studies into modelling studies and studies based on primary data. RESULTS: We found 200 articles, approximately. The findings show that 164 articles ignore the constraints, accounting for 88 and 76 articles of primary data use and modelling use, respectively. Only 32 articles deal with or relax the constraints. Of these articles, 27 articles focus on the task shifting and the rest of them were distributed to the categories of dealing and relaxing, almost equally between modelling use and primary data use. CONCLUSIONS: Many cost effectiveness studies were conducted in settings in which human resource constraints are important. Although this is acknowledged, human resource constraints are often ignored in health economic evaluations. This practice results in biased estimates of the cost-effectiveness of interventions and misinform decision makers. Guidance on how to properly deal with human resource constraints in cost-effectiveness analyses is needed.

PM37
MULTIPLE TO SINGLE TRANSITION PROBABILITY: HCV-BASED EXAMPLE
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OBJECTIVES: Constructing a Markov model can be challenging as available data can be limited. In hepatitis C, more complex models that includes F0, F1, F2, F3 and F4 fibrosis stages are required by HTA agencies. However transition probabilities (TP) can only be available to cirrhotic (F5/F6) patients. Estimating separate TP for F0 to Fn1 (F0, F1, F2) can be challenging as Markov models are non-linear. The objective of this study was to estimate Fn1 to TF from a single non-cirrhotic (F0/F2) to cirrhotic (F4/F6) TP. METHODS: Results in markov models are typically the result of a sum of cycles spent in each state. Thus, the method was built to produce

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PRM35
COMPARING COST-EFFECTIVENESS OF EMERGING DRUGS IN ADVANCED CANCER WITHOUT HAZARD RATIOS FOR PROGRESSION
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OBJECTIVES: To compare the cost-effectiveness via progression-free survival (PFS) for a new drug for advanced cancer (immuno-therapy A) against two active comparators, both emerging drugs with publications reporting only their comparison against best supportive care (BSC) with progression-free survival curves, median survival and hazard ratios. METHODS: PFS of therapy A compared to BSc could not be represented through a single hazard ratio (HR) estimates as progression hazards were obviously changing over the study course. Improvements in median PFS in all three studies were similar (2.5, 2.6, 2.6 months) while median FSS for BSC in three studies were 5.0, 6.7, 4.0 months. This highlighted the need for a meta-analysis to compare therapies. Instead of meta-analysing hazard ratios, the Ouwens method was applied to all six survival curves: (i) the curves were digitized and fitted to Weibull distributions, (ii) a fixed-effects model on shape and scale parameters was developed to deduce adjusted survival curves for the two comparators. RESULTS: Two adjusted survival curves for comparator therapies were obtained and anchored to the control arm for therapy A. The areas under the adjusted PFS curves, with ratios 1.48 and 1.35 in favour of the new drug, were introduced in the cost-effectiveness model. CONCLUSIONS: The Ouwens method of meta-analysing progression-free survival curves was introduced into a cost-effectiveness model in advanced cancer. Meta-analysing not just the hazard ratio but also the whole curve of the survival data and adjusting for therapy and between-study differences enabled to build a cost effectiveness model in a situation where comparisons based on HR or on median survivals were not feasible.