effects model was fitted with binomial likelihood. The performance of the method applied to a sparse network with six treatments and one study per comparison. A review was conducted to identify methods dealing with zero cells for binary events in NMA is still open, our research shows that methods are available to address this issue. However, no clear recommendations can be provided.

PRM219
Dealing with zero cells in sparse networks in Bayesian network meta-analysis

Ismail C., Akalisa R., Heemstra L., Van Engen A.

Objectives: Bayesian Network Meta-Analysis (NMA) models for binary data are well established and special precautions do not usually need to be taken in the case of zero cells. Furthermore, trials with zero cells in both arms are usually excluded from the analysis. However, in sparse networks with only one trial per comparison and zero cells in unique link studies, their inclusion may be meaningful. A diagnostic method is available for NMA, but not for MRA.

Methods: A review was conducted to identify methods dealing with zero cells for binary outcome data in sparse networks in a Bayesian setting. The identified methods were applied to a sparse network with six treatments and one study per comparison. The outcome was good + Bad Adverse Events and measured by Odds Ratio. A fixed effects model was fitted with binomial likelihood. The performance of the methods was assessed by the residual deviance and the Credible Intervals (CrI) width was compared. Results: We identified three methods: apply a continuity correction (a constant factor of 0.5 or the reciprocal of the opposite treatment size), use of independent treatment effect as a default, or use of a set of 'costs against review' defined by mutually exclusive treatment search terms that comprise the full set of possible intersections between the individual treatments. Throughout the systematic review process separate counts of abstracts, papers and studies are maintained for each of these component reviews. The results from the component-reviews can then be combined to reflect any final review scope (based on individual treatments). We will illustrate the methodology with an example review of the comparative efficacy of licensed thiazolidinedione's with a focus on their cardiovascular benefits.

PRM220
Quality Assessment of Observational Studies for Systematic Reviews

Kiss N., Tongbrai V., Fortier K.J.

Objective: Systematic reviews are frequently included in systematic reviews, especially in those disease areas where RCTs are limited. While there are very specific tools for and guidance on assessing the quality of RCTs, the assessment of observational studies has not yet been developed. OBJECTIVE: To determine whether different tools used to review the quality of observational studies and to make recommendations based on our evaluation. METHODS: First, a systematic review of literature from 2005-present was conducted in Embase and Medline to determine the frequency of use of quality assessment for observational studies and the type of tools used to conduct the assessment. Second, we reviewed documentation from NHS guidance on quality assessment of non-randomized studies. Finally, we reviewed two years of approved HTA submissions to see what methods of assessment have been used for submissions. RESULTS: A total of 1429 articles were screened. Compared to a similar study on older literature, our review found an increase in the use of quality assessment in observational studies. However, we found that many studies continue to devise their own tool or adapt existing tools rather than use a tool in its entirety. Down's and Black, MOOSE, and STROBE were the most referenced tools, although STROBE was not originally intended for such use. Guidelines centered on “non-randomized” studies were mixed and were not always found to be applicable to observational studies, but instead mostly to single-armed clinical trials. CONCLUSIONS: There is still need for guidance and standardization for observational studies assessment for use in systematic literature reviews. Although quality assessment of observational studies is still not standardized, there are a few methods becoming more frequent in the literature but are difficult to compare across systematic literature reviews because they have often been adapted by each author.

PRM221
An approach for quantification of patient advocacy group input in the HTA process

Hicks N., Touni M.

Objectives: Patient input in HTA pathways by the appropriate disease Patient Advocacy Group (PAG) uses principally humanitarian and social studies as an evidence base followed by critical evaluation against traditional CEA (Cost Effective Analysis) via a scientific process. Published and Public Involvement (PPI) in HTA is associated with a low evidence base potentially limiting its value. Research presented at ISPOR 2012 by the same authors concluded a need to improve and standardize PAG input integration in HTA decision making. To investigate the way different forms of knowledge / expertise are used by PAGs in NICE HTA for guideline development and new technology review. We will look at: 1) Influence of PAG structure, resource capability, internal process and the impact of PAG advisory board physician representatives on HTA conclusions;and 2) PPI itself will be measured in greater detail.

PRM222
Fooling jurisdictions: Methods for conducting modular systematic reviews?

Thompson J., Hawkins N.

Objective: A systematic review is a clear description of the disposition of studies throughout the various steps of the review process (de-duplication, abstract review, full paper review and final inclusion). This is commonly achieved using a PRISMA diagram. The number of steps required can vary between jurisdictions or over time. In these cases, it may be time consuming to recreate the on-going counts of exclusions and inclusions throughout the review process. However, this can be a challenge to save the scope of the review changes from the original specification. This may happen where the set of licensed treatments or HTA requirements vary between jurisdictions or over time. In these cases, it may be time consuming to recreate the on-going counts of exclusions that correspond to the modified scope. We present a methodology for conducting a modular systematic review in which PRISMA diagrams and other descriptions of study disposition can be generated corresponding to any subsequent changes of scope. This is achieved by splitting the submission process into a set of ‘costs against reviews’ defined by mutually exclusive treatment search terms that comprise the full set of possible intersections between the individual treatments. Throughout the systematic review process separate counts of abstracts, papers and studies are maintained for each of these component-reviews.

PRM223
Social network analysis of authorship networks and the selection of expert advisors

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Objective: Systematic reviews are often supplemented with the use of external experts to provide guidance on the nuances of the area. This can help add context if a review is used to support trial design or health economic model development. The ideal expert would have a deep understanding of the area and be well connected to those individuals conducting trials. The aim of the current research was to assess whether social network analysis of coauthor networks could be used to rapidly and objectively identify individuals with the qualities desired in an external expert. METHODS: Publication lists from a recent systematic review of rheumatoid arthritis were used to produce a list of links between authors and publications. This was then imported into the Gephi program for social network analysis. Within Gephi, matrix multiplication was used to transform this network into a coauthorship network. Eigenvector centrality was then used to infer the amount of access individual authors have to the research community as a whole. The use of eigenvector centrality as a measure of influence within the author network was then validated by correlating the centrality scores of a random sample of authors against independent ratings of desirability of those individuals’ expertise. RESULTS: The coauthor network for rheumatoid arthritis, while not completely connected, showed a high degree of connectivity (mean degree: 36; average cluster coefficient: 5). Eigenvector centrality allowed for the identification of key experts, with the highest scoring experts each providing direct access to approximately half of the whole network. Eigenvector centrality scores were a reliable indicator of mean desirability scores (r-squares=0.0015, R-squared=0.69). CONCLUSIONS: Social network analysis of coauthor networks provides an efficient and robust method for the identification of expertise, and can be used as part of the systematic review process.