they have different clinical profiles impacting both efficacy and durability outcomes. Using an indirect comparison approach, this study assessed the clinical effects of combination therapy (CT) using alpha-blockers and 5-alpha reductase inhibitors, two emerging MISTs (prostatic urethral lift [PUL] and water vapor thermal therapy [WVTT]), and two invasive surgical procedures (photoselective vaporization of the prostate [PVP] and transurethral resection of the prostate [TURP]).

Methods. A systematic search of Medline, Embase, Cochrane Library, and relevant health technology assessment (HTA) databases was conducted to identify randomized and non-randomized clinical trials of the five treatments published prior to December 2020. Trials were included if they reported changes in International Prostate Symptom Score (IPSS) and retreatment rates, without any country or language restrictions. A random-effects network meta-analysis (NMA) with an aggregate regression model was performed to account for the baseline BPH severity and characteristic differences among men from the different trials.

Results. A total of 237 of 3,104 retrieved abstracts were included for full-text review. Of these, 16 randomized and four non-randomized clinical trials were included in the NMA. The random-effects NMA showed among medical and minimally invasive therapies, WVTT had the greatest one-year IPSS improvement (-Δ11.7), followed by PUL (-Δ10.4) and CT (-Δ10.3). The one-year IPSS improvement for TURP and PVP was comparable (-Δ14.1 vs. -Δ13.8, respectively; p-value=0.675). The one-year retreatment rates were lowest for WVTT (3.0%), followed by CT (3.6%), TURP (6.3%), PVP (7.8%), and PUL (8.0%).

Conclusions. WVTT provided greater clinical and durability benefits compared to other less invasive treatment options for men with BPH. Given NMA is increasingly used in HTA processes, this study provided systematically synthesized evidence that could facilitate decision-makers in determining new technology coverage decisions globally.

OP20 Is The Quality Of Evidence In Health Technology Assessment Deteriorating Over Time?: A Case Study On Cancer Drugs In Australia

Yuan Gao (yuan.gao02@adelaide.edu.au), Mah Laka and Tracy Merlin

Introduction. Recently, there have been concerns regarding a trend toward poorer quality evidence being accepted by regulatory institutions and the consequent impact on health technology assessment (HTA) decision-making. This study aimed to determine whether there has been a change in the quality of evidence provided on cancer drugs proposed for listing on the Pharmaceutical Benefits Scheme, using data solely extracted from public summary documents (PSD) published by the Australian government.

Methods. PSDs published from July 2005–2020 were reviewed. Metrics associated with quality of evidence were extracted, including the directness of comparison, study design, sample size, and risk of bias (RoB). Additional data were extracted to provide greater context to any observed trends in quality of evidence. Analyses were performed across different time periods. Associations between the quality of evidence and time periods were explored using logistic regression analysis.

Results. In total, 214 PSDs were included in the analysis. Only 13 percent of submissions provided a single arm study or observational study as the key evidence; however, 37 percent of submissions did not contain a direct ('head-to-head') comparison relevant to Pharmaceutical Benefits Advisory Committee (PBAC) decision-making. Among all submissions containing direct evidence, about half had findings of a moderate/high/unclear RoB. Among all submissions containing indirect comparisons, over half had transitivity issues. In submissions containing direct comparisons, there was an increase in the RoB over time even after adjusting for trial data maturity and the rareness of the drug indication (odds ratio [OR] 1.30; 95% confidence interval [CI] 0.99, 1.70). There were no clear time trends observed in sample size, directness, study design, or transitivity issues during any of the observed time periods.

Conclusions. In the last 7 years, a high proportion of cancer drug submissions presented findings with a high RoB and transitivity issues. As the evidence dossiers provided to the PBAC are often congruent with submissions made elsewhere, this poor evidence quality is of concern and can only lead to higher levels of decision-maker uncertainty.

OP21 A Critical Review Of Existing Health Inequality And Health Inequity Frameworks In Evidence Synthesis

Patience Kunonga (patience.kunonga@newcastle.ac.uk), Barbara Hanratty, Pete Bower and Dawn Craig

Introduction. In recent years, there has been a growing recognition that health equity and health inequalities should be a consideration in all aspects of research. Since the Commission on Social Determinants of Health by the World Health Organization was established in 2005, there has been a growing interest in tackling systemic differences in health outcomes, including expanding the scope to health research including evidence synthesis and health technology assessments (HTA). This analysis aims to identify health inequality and health inequity frameworks that exist to help structure and plan research methods in evidence synthesis.

Methods. A critical analysis of the existing frameworks used in evidence synthesis to address health inequality and/or inequity was undertaken. Comprehensive, systematic searching of seven social science electronic databases and grey literature was undertaken based on the Behavior/phenomenon of interest, Health context and Model/Theory (BeHEMoTh) model, from 1990 to May 2022 to identify all relevant studies. A narrative synthesis approach was used to critically appraise the existing frameworks.

https://doi.org/10.1017/S0266462322000800 Published online by Cambridge University Press

Results. Sixty-two reviews published between 2008 and 2022 reporting on using a framework to stratify health opportunities and outcomes met the inclusion criteria. Frameworks identified included the PROGRESS (place of residence, race or ethnicity, occupation, gender, religion, educational level, socioeconomic status, and social capital), PROGRESS-Plus (plus age, disability and sexual orientation) and Preferred Reporting Items for Systematic Reviews and Mata Analysis (PRISMA) – Equity checklist.
Conclusions. Currently, there does not seem to be consensus in how evidence of inequality or inequity in evidence synthesis or HTA are reported. As research interests in health inequality and inequity continue to grow, there is a need to develop a framework that provides an in-depth understanding of how inequalities in health and inequities in health should be considered within evidence synthesis and HTA. This will allow researchers to analyze not just the effects of interventions, but also how healthcare outcomes are impacted by inequalities or inequities.

OP22 Using Threshold Analysis To Guide Searches For Additional Sources Of Evidence

Sumayya Anwer (sumayya.anwer@york.ac.uk), Sofia Dias, Mark Simmonds, Emily South, Ros Wade and Alison Eastwood

Introduction. Threshold analysis is a novel statistical approach which can be used to investigate which direct comparisons in a network meta-analysis (NMA) have estimated relative effects that may not be robust to changes in the evidence, either due to possible bias, sampling variation, or relevance.
Methods. In a health technology assessment of the clinical effectiveness of ablative and non-invasive therapies for patients with early hepatocellular carcinoma (HCC), we conducted a threshold analysis to identify treatment comparisons that would be sensitive to changes in the randomized controlled trial (RCT) evidence used in the NMAs, potentially leading to a change in the recommended treatment. The results of the threshold analysis were used to guide a targeted systematic review of high-quality, non-randomized, prospective comparative studies that could strengthen the evidence for those comparisons identified as sensitive to change.
Results. We conducted NMAs of RCT evidence for four outcomes: overall survival (16 RCTs), progression-free survival (6 RCTs), overall recurrence (7 RCTs), and local recurrence (10 RCTs). The results of the NMAs displayed a high level of uncertainty, attributable to the sparse nature of the network, characterised by interventions being mainly compared in small trials. A targeted systematic review was conducted on relevant interventions that were identified as being sensitive to changes in evidence by the threshold analysis. The studies identified in this review were incorporated into a second NMA to support the RCT evidence.
Conclusions. Threshold analysis has been typically used as a tool to assess how robust comparisons in an NMA are to additional sources of evidence, but it can also be used to guide the search for additional non-randomized evidence when the available RCT evidence is sparse.

OP24 Impact Of Patient Input On Cancer Drug Funding Recommendations In Canada

Wiesława Dominika Wranik (dwl@dal.ca), Anh Thu Vo and Min Hu

Introduction. Patient involvement in health technology assessment (HTA) has documented advantages, such as improved understanding of disease context, and increased legitimacy and transparency of the HTA process. In the absence of clear metrics, thresholds, or criteria, it is not clear how input regarding patient preferences influences HTA based recommendations of the pan Canadian Oncology Drug Review (pCODR).
Methods. This is a concurrent complementary mixed methods study. A quantitative model (logit) is used to estimate the impact of patient input and other HTA criteria on pCODR recommendations. A qualitative analysis of semi-structured interviews with Canadian HTA committee members is used to describe the mechanisms of action through which patient input influences recommendations.
Results. Patient input was considered important in providing context to the HTA discussion, but committee members were not able to explicate how any specific elements of patient submissions weighted into the committee's recommendation. There was an element of mistrust in the patient input data. The estimated impact of patient input on funding recommendations is not statistically significant, recommendations remain driven by evidence of clinical benefit.
Conclusions. The commitment to inclusion of patient perspectives in HTA in Canada is strong, and procedurally Canada is among the leaders in this regard. The tangible impact of patient input could be increased with an improved system for collection of most relevant data, and clear guidelines about how patient input should weigh into HTA recommendations.

OP26 Policy Perspectives Of Health Technology Assessment In Ethiopia

Desalegn Ararso (desalegn.ararso@aau.edu.et)

Introduction. Health technology assessment (HTA) is defined as a multidisciplinary field of policy research that provides evidence on the consequences of adopting and using health technologies. A ministry of health with jurisdiction over HTA should determine the influence of public law on all HTA-related activities and the rules that apply. Therefore, health decision-makers interested in HTA must learn to navigate the legal system, starting by situating it in the legal apparatus of the country. As a result, establishing a national HTA system requires designing a legal pathway towards HTA. However, a historic overview of HTA, in the context of policy documents of Ethiopia is not clearly reported. Therefore, this review is warranted

https://doi.org/10.1017/S0266462322000800 Published online by Cambridge University Press