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Oral Presentations

OP01 Convergent Validity Between Discrete Choice Experiment And Other Stated Preference Methods: A Multistudy Comparison

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Introduction. To assess convergent validity of stated preference methods in studies where they were used to elicit patient preferences for informing medical product decisions.
Methods. In four studies, two stated preference methods were used to elicit preferences of patients with neuromuscular diseases (NMD; n = 140, Discrete Choice Experiment [DCE] and Best-Worst Scaling [BWS] case 2), diabetes (n = 495, DCE and swing weighting [SW]), myocardial infarction (MI; n = 335, DCE and BWS case 1), and rheumatoid arthritis (RA; n = 982, DCE and probabilistic threshold technique [PTT]). In each study, results of the two methods were compared using a normalized preference measure for which confidence intervals (CIs) were estimated using non-parametric bootstrapping of 500 samples. Normalized preference measures comprised of mean relative attribute importance weights (NMD and diabetes studies), attribute uptake probability (MI study), or maximum acceptable risk (RA study).
Results. In all four studies, attribute ranking showed similar patterns between DCE and other methods for the most important attributes. The same attribute had highest importance in three out of four studies. Significant differences were found in ranges of normalized preference measures of each study between DCE and the other methods: 4.1–43.4 versus 8.9–24.7 for DCE and BWS case 2 in NMD; 3.8–49.7 versus 11.9–16.8 for DCE and SW in diabetes; 2.0–85.5 versus 0.2–69.0 for DCE and BWS case 1 in MI; -3.5–49.2 versus 1.1–18.1 for DCE and PTT in RA.
Conclusions. Preferences differed significantly between DCE and other preference methods implying limited convergent validity. The substantially larger ranges in normalized outcome measures in DCE compared to other methods, are likely due to differences in mechanics and bias related to the methods. Since none of the methods is considered the golden standard for measuring stated preferences as true preferences are unknown, further studies are necessary to compare stated preference methods, determine internal validity and data quality, and potentially measure external validity.

OP02 The Use Of Discrete Choice Experiments For Measuring Patient Preferences In Health Technology Assessment

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Introduction. Understanding patient preferences and the demand for healthcare interventions and technology is critical for health technology assessment (HTA). New health technologies have potential for savings and increased efficiency but even the most cost-effective and efficacious interventions can fail if patient preferences are not properly accounted for. Patient preferences in HTA are primarily limited to representation in appraisal committees; however, more robust methods are available and should be incorporated into the assessment of interventions.
Methods. Using data from three discrete choice experiments (DCEs), we reflect on the importance of patient preferences in the design of healthcare interventions. We draw insights from three studies which investigated preferences relating to HIV self-testing amongst long distance truck drivers in Kenya; differentiated antiretroviral therapy services amongst stable HIV patients in Zimbabwe; and tuberculosis preventive therapy for children in Eswatini.

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Results. We highlight three key findings. First, understanding patient preferences is crucial when designing services, and providers sometimes underestimate behavioural barriers and overestimate the extent to which people are motivated simply by health benefits. Optimism is often driven by evidence showing high acceptability, but when preference structures are incorporated in intervention design, there are important insights into how patients plan to utilize services. Second, trade-offs matter in determining which characteristics are perceived to be most important to patients – a key strength of the DCE methodology. Understanding of these trade-offs can help prioritize which characteristics of interventions to target. Finally, disentangling the effect of different characteristics of service delivery models on preferences is important for rethinking how interventions are delivered. If services are designed to better align with preferences, implementers can ensure new interventions have the desired effect on health and economic outcomes.
Conclusions. These findings highlight the value of behavioural economic approaches for investigating preferences for health interventions and providing insights into the demand for services, which must feed into the HTA analyses. Incorporating DCEs into HTA is inexpensive and provides robust data for improving HTA.

OP03 Patient Characteristics Affect Their Treatment Choice: A Discrete Choice Experiment With Breast Cancer Patients In Six European Countries

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Introduction. The evolution of breast cancer treatments over the last decade has resulted in tailored therapies for the different types and stages of breast cancer. Each treatment has a profile of benefits and adverse effects which are taken into consideration when planning a treatment pathway. The objective of this study is to examine whether patients' preferences are in line with what is considered important from policy-makers viewpoint.
Methods. An online discrete choice experiment (DCE) was conducted in six European countries (France, Germany, Ireland, Poland, Spain, UK) with breast cancer (BC) patients. The DCE comprised of six attributes: overall survival (OS), hyperglycaemia, rash, pain, functional well-being (FWB) and out-of-pocket payment (OOP). Sixteen choice sets with two hypothetical treatments and a "no treatment" option were presented. Sociodemographic and disease related data were collected. Heteroscedastic conditional and mixed logistic models accounted for scale and preference heterogeneity between countries and patients respectively. Latent class analysis categorized patients in classes. Marginal rates of substitution (MRS) were estimated for OOP versus the rest of attributes to establish the ranking of preferences for each attribute.
Results. Two hundred and forty-seven patients with advanced or metastatic BC and 314 with early-stage BC responded. Forty-nine percent of patients were less than 44 years old and 65 percent had completed university education. The MRS of the analysis demonstrated that "severe pain" is the highest dis-preferred attribute level, followed by "severe impairment in FWB" and OS. Four classes of patients as "decision-makers" were identified. Additionally, there is sensitivity in preferences for both levels of pain and FWB depending on the stage of the disease.
Conclusions. This study suggests that there is heterogeneity in treatment preferences of breast cancer patients depending on their sociodemographic and disease related characteristics. In combination with clinical guidelines, patient preferences can support the selection and tailoring of treatment options.

OP04 Methodological Challenges Of Assessing An Evolving Technology: The Cochlear Implant For Deaf People

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Introduction. When Cochlear implants (CI) were first introduced, only postlingually, profoundly hearing impaired individuals were implanted unilaterally. As experience grew, eligibility was followed by prelingual deaf children, and a second contralateral CI was being considered. Due to surgical and technological improvements, eligibility criteria for CI are now shifting, encompassing patients with more residual hearing. We aimed to explore, *ex ante*, whether such shift is warranted.
Methods. A dynamic, population-based Markov modeling study was conducted. Model parameters were based on available evidence, expert opinion, and calibration. The model mimics Dutch demographic development in three age categories over a period of 20 years. Impact of changing eligibility was explored in terms of number of CI recipients, costs, quality of life and cost-effectiveness from a societal perspective.
Results. If those with severe hearing loss would qualify and opt for CI similar to those with profound hearing loss, this would lead to a fourfold increase of CI recipients (from 8,815 to 35,630) over a 20 year period, resulting in an increase in costs (EUR 550 million) and QALYs (54,000), with an Incremental Cost Utility Ratio of EUR 10,771/QALY (2.5–97.5 percentiles: 1,252–23,171).
Conclusions. Results suggest that expected health gains could be such, that the investment may be considered cost-effective against the backdrop of currently prevailing criteria. However, for this, a substantial increase in operating capacity, follow-up care and rehabilitation are required. Further inquiries are needed to investigate whether such increased capacity can be achieved, to ensure equitable access to those services.

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