OP93 Informing Efficient Diagnostic Monitoring Pathways Using Prospective Cohort Data: A Case Study In Neovascular Age-Related Macular Degeneration

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Introduction. Several diagnostic tests are often adopted into diagnostic pathways for specific indications without strong evidence to support their use. In this context, real-world prospective cohort studies in combination with decision modelling can generate evidence to support decision-making. The Early Detection of neovascular Age-Related Macular Degeneration (EDNA) study was a prospective cohort designed to assess the diagnostic accuracy and cost-effectiveness of several monitoring tests used in routine practice for the detection of neovascular age-related macular degeneration (nAMD) in the second eye of patients being treated for unilateral disease.

Methods. Five-hundred and fifty-two participants with newly diagnosed unilateral nAMD were monitored for up to 3 years in 24 UK eye clinics. The diagnostic monitoring performance of five index tests was compared: self-reported change in visual function, Amsler test, clinic measured change in visual acuity, fundus assessment by clinical examination or colour photography, and spectral-domain optical coherence tomography (SD-OCT). The reference standard was fundus fluorescein angiography (FFA). A patient-level state transition model was used to simulate the onset of nAMD in the second eye, and assess the impact of different tests on the timing of detection and treatment, and associated costs and quality adjusted life years (QALYs) over a 25-year time-horizon.

Results. One hundred and forty-five (26.3%) patients developed active nAMD in the study eye, of whom 120 had an FFA at detection. SD-OCT had the highest sensitivity (91.7 percent (95% CI: 85.2-95.6) and provided high specificity (87.8% (95% CI: 83.8-90.9)). It generated more QALYs and lower health and personal social care costs compared to all other monitoring tests. The combination of SD-OCT with fundus-examination provided a marginal increase in sensitivity over OCT alone, but the associated incremental cost-effectiveness ratios was >GBP 100,000 per QALY.

Conclusions. The efficiency of diagnostic pathways for nAMD may be improved by using SD-OCT alone to monitor the second eye of people being treated for unilateral disease. Prospective cohort studies embedded into routine practice offer value for informing decisions surrounding the use of technologies already in routine use.

OP94 Online Elicitation Of Personal Utility Functions (OPUF): A New Tool For Eliciting EQ-5D-5L Value Sets On The Societal-, Group-, Subgroup-, And Individual-Level

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Introduction. The ‘Online elicitation of Personal Utility Functions’ (OPUF) is a new method for valuing health states. It is based on compositional preference elicitation techniques. In contrast to established, decompositional techniques, such as time trade-off or discrete choice experiment (DCE), the OPUF approach does not require hundreds or thousands of respondents, but allows estimating utility functions for small (patient) groups and even on the individual level. The objective of this study was to generate and compare EQ-5D-5L value sets on the societal-, group-, subgroup-, and individual-level.

Methods. A demonstration version of the EQ-5D-5L OPUF Tool is available at: https://eq5d5l.me. It broadly consists of three valuation steps: dimension weighting, level rating, and anchoring. Responses were combined on the individual level to construct personal utility functions. Every respondent also completed three conventional DCEs. Preferences were aggregated across individuals to estimate a societal and various group-level preference functions. We then assessed the heterogeneity of preferences between groups using descriptive statistics and k-means cluster analysis.

Results. A representative sample (n = 1,000) of the United Kingdom (UK) population was recruited through the prolific online platform. On average, it took participants about 7 minutes to complete the survey. Data of 874 respondents were included in the analysis. For