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COMPARISON OF THE EQ-5D-5L AND AQOL-8D IN A COHORT OF PEOPLE WITH IDIOPATHIC PULMONARY FIBROSIS IN AUSTRALIA


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Background: Idiopathic pulmonary fibrosis (IPF) is a debilitating chronic lung disease with a high symptom burden, which has a substantial impact on health-related quality of life (HRQoL). One way to assess the performance of the Euroqol five-dimension (EQ-5D-5L) and the Assessment of Quality of Life- eight dimension (AQOL-8D) questions in measuring HRQoL as utility values (HSUV) in an Australian IPF cohort.

Methods: Data were collected from participants of the Australian IPF Registry (AIIPR) using self-administered surveys which included the EQ-5D-5L and the AQOL-8D. Clinical data and disease specific HRQoL instruments were collected from the AIIPR. Performance of the two instruments was evaluated based on questionnaire practicality, agreement between the two instruments and test performance (internal and construct validity).

Results: Overall completion rates for the EQ-5D-5L and AQOL-8D were 96% and 85% respectively. Mean (median) HSUVs were 0.65 (0.70) and 0.69 (0.72) for the EQ-5D-5L and AQOL-8D respectively. There was reasonable agreement between the two instruments based on the Bland-Altman plot mean difference (-0.04) and intraclass correlation coefficient (0.64), however there were some differences. A larger range of values was observed with the EQ-5D-5L when compared to the AQOL-8D (-0.57-1.00 vs 0.16-1.00). The EQ-5D-5L had a greater divergent sensitivity and efficiency (0.84) over the AQOL-8D (0.78) and the AQOL-8D respectively. There was reasonable agreement between the two instruments based on the Bland-Altman plot mean difference (-0.04) and intraclass correlation coefficient (0.64), however there were some differences. A larger range of values was observed with the EQ-5D-5L when compared to the AQOL-8D (-0.57-1.00 vs 0.16-1.00).

Conclusion: The EQ-5D-5L exhibited better performance when compared to AQOL-8D in persons with IPF. This may be attributable to the high symptom burden which is physically debilitating to which the EQ-5D-5L may be more sensitive.

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OSTEARTHritis Affecting Health-related quality of Life Among Older Patients

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Objectives: Osteoarthritis is a common subtype of musculoskeletal disorder (MSD) among older adults. It is associated with increased swelling, inflammation, decreased range of motion, and joint instability with significant implications on health-related quality of life (HRQoL). This study compared HRQoL of patients with osteoarthritis and other types of MSDs. Methods: The nationally representative study sample was selected from the 2011-2019 Medical Expenditure Panel Survey (MEPS). This cross-sectional study compared the Physical Component Summary (PCS) and Mental Component Summary (MCS) scores of osteoarthritis patients (ICD10 M15-M19 and ICD9 715-716) and other MSDs patients 50 years and older of age. An inverse probability of treatment weighted (IPTW) regression analysis was conducted to control for sociodemographic and clinical factors to assess the marginal HRQoL burden associated with osteoarthritis compared to other MSDs. Results: The study included 214,114 osteoarthritis patients representing 507 million other MSD patients. Most of the patients with osteoarthritis were non-Hispanic white (69.6%), female (62.4%), and working in white-collar jobs (45.3%). The mean PCS and MCS scores were 36.17 (SE:0.19) and 46.60 (SE:0.19), respectively, in osteoarthritis patients, while in the other MSD patients, the PCS and MCS scores were 40.28 (SE:0.17) and 46.50 (SE:0.16), respectively. The IPTW regression analysis found that osteoarthritis patients had a 4.87 (SE:0.30) unit lower PCS score compared to patients with other MSD (43.03 (SE:0.20)). However, the MCS score did not differ between osteoarthritis patients and other MSD patients. Conclusions: Osteoarthritis is associated with decreased PCS compared to other MSDs. Further research is needed to understand the treatment impact on HRQoL to alleviate the burden associated with osteoarthritis.

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MAPPING CHU9D UTILITY SCORES FROM THE PEDSQl™ FOR CHILDREN WITH CHRONIC CONDITIONS IN AN ETHNICALLY DIVERSE AND DEPRIVED METROPOLITAN POPULATION


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Objectives: The Child Health Utility 9D (CHU9D) is a paediatric preference-based questionnaire to measure health related quality of life (HRQoL) commonly used in cost-effectiveness analysis, but not currently available, mapping algorithms for both the Paediatric Quality of Life Inventory™ (PedsQL) into the CHU9D exist. Current maps are based on populations with limited age ranges and medical conditions and, thus, require further external validation. This study externally validates the most recent PedsQL to CHU9D mappings and develops new mappings based on a sample with a wide age range (0 to 16 years of age) and chronic conditions (asthma, eczema, or constipation).

Methods: Data from the Children and Young People’s Health Partnership (CYPHP) Evelina London Model of Care, a new integrated paediatric health economy model, were used. N=1,775 participants responses were imputed into existing mappings and predicted CHU9D values obtained and compared to observed values based on goodness of fit measures (R-squared, mean absolute errors, MAE, mean squared errors, and the percentage of observations with an absolute difference for smaller than 0.05). The study sample was randomly divided into estimation (80%) and validation (20%) groups.

Results: Existing mappings show an acceptable performance in the CYPHP sample. All MAEs (lower values indicate better fit) are between 0.055 (5-7 years, dimension 0.8) and 0.075 (16 years, dimension 0.8). The mean absolute error was 0.10 (0.8 dimension). The study sample was randomly divided into estimation (80%) and validation (20%) groups.

Conclusions: The new CYPHP mapping algorithms can predict CHU9D scores from PedsQL scores with good accuracy. These algorithms performed those also externally validated in this study. The CYPHP mappings are particularly relevant for samples with children and young people with chronic conditions living in deprived and urban settings. Further validation in an external sample is needed.

Applications of Discrete Choice Experiments for Patient Preference Elicitation

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PATIENT PREFERENCES FOR MULTIPLE MYELOMA: A STATED PREFERENCES SURVEY USING DISCRETE CHOICE EXPERIMENT AND SWING WEIGHTING


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Objectives: Patient preferences have become an important aspect of drug development and evaluation. Understanding patient preferences is especially valuable in Multiple Myeloma (MM), where the rapid development of treatments with diverging benefit-risk profiles raises uncertainty about what matters most to patients. This study aimed to investigate which treatment attributes (side-effects, symptoms, efficacy outcomes, uncertainties) are most important to MM patients. Methods: A preference survey incorporating Discrete Choice Experiment (DCE) and Swing Weighting (SW) was widely disseminated through the European MM patient population. The survey was developed using a qualitative study during which MM patients (n=24) reached consensus on the attributes and levels included in the survey. MM patients and patient organizations provided extensive feedback during the survey development and piloting. Results: 393 MM patients across 21 countries participated. Patients were heterogeneous regarding years since diagnosis (M: 6) and prior therapies (M: 3). While life expectancy was most important to patients with the most and least prior therapies, quality of life-related attributes such as pain and mobility problems were most important to patients with intermediate treatment experience. Significant preference heterogeneity was revealed depending on participants’ side-effect and symptom experience. Participants highlighted the difficulty of trading-off between life expectancy and quality of life, and between physical and mental health. Patients demanded psychological support to cope with their symptoms, side-effects and uncertainties. Conclusions: Preferences elicited from patients reveal the need for the systematic inclusion and prioritization of quality of life-related treatment outcomes in drug developers, regulators, Health Technology Assessment bodies, and healthcare providers in MM drug development, evidence generation, evaluation, and clinical practice. In order for patients to make informed choices in preference studies, researchers should involve patients and patient organizations during the selection of the attributes, levels, and explanations, how the preference questions are asked, the visuals and survey technology.

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PATIENT PREFERENCES FOR TREATMENT OF BCG-UNRESPONSIVE NON-MUSCLE INVASIVE BLADDER CANCER: A DISCRETE CHOICE EXPERIMENT

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Objectives: First-line treatments for high-risk non-muscle invasive bladder cancer (NMIBC) include transurethral resection of the bladder tumour and Bacillus Calmette-Guerin (BCG) intravesical therapy. If BCG therapy fails, patients are offered bladder removal surgery (radical cystectomy (RC)), a major surgical intervention with impact on quality of life. This study identifies the trade-offs patients are willing to make when choosing between RC and an alternative medical treatment. Methods: An online discrete choice