P-352/1486/RELIABILITY OF TIME-TRADE OFF TO ELICIT PREFERENCES IN COPD PATIENTS

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Aims: To test the reliability of Time-Trade-Off (TTO) to obtain preference weights in-patients with chronic obstructive pulmonary disease (COPD). *Background*: Items suitable for use in a disease-specific utility instrument for COPD were identified from the St George's Respiratory Questionnaire (SGRQ) by applying classical test methods and Rasch analysis to an existing large data set. Nine items were selected, three from each SGRQ domain: Symptoms, Activity and Impacts. The items for each domain were chosen on the basis of their location along a Rasch item map to reflect mild, moderate and severe disease (one of each severity per domain). An item could also be absent from the domain, thus making four severity levels for each domain. A total of 64 ($4\times4\times4$) health states (HS) were created to produce all possible combinations, but we used the most common 27 HS, selected on the basis of combinations found in existing data. Using a simple scale for item severity (absent = 0, mild = 1, moderate = 2, severe = 3), each HS corresponded to 1 of 10 severity levels. *Methods*: 50 COPD out-patients were studied (age 71 years SD 10, 50% male, FEV1 1.0 l, SGRQ score 55 SD 16 units). Each rated their current health and 9 HS using TTO and a Visual Analogue Scale (VAS). *Results*: There was a linear correlation between HS severity and TTO estimate ($r = 0.93$, $p < 0.0001$) with no 2nd order component ($p = 0.3$). The VAS score had a non-linear association with HS severity ($r = 0.96$, 2nd order component $p < 0.0001$) due to a ceiling effect that produced similar scores for HS in the highest severity tertile. *Conclusions*: Older patients with COPD used TTO to rate their preferences for health states in a reliable manner. VAS scores did not distinguish between the most severe health states.

P-353/1069/PROBLEM AREAS IN DIABETES & FEAR OF SELF-INJECTION: A COMPARISON OF INSULIN DELIVERY SYSTEMS

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Aims: This study evaluated problem areas in the treatment of diabetes among patients who used the InnoLet insulin doser and standard vial/syringe. *Methods*: In a prospective, randomized, open-label, two-period, crossover study, 260 patients were enrolled (age≥18 years, with type 1 or 2 diabetes, receiving NPH or regular or 70/30 insulin for ≤ 6-months and baseline A1C ≤ 10%). Those excluded were: unable to read/write English or administer their own injections, pregnant/lactating, using antipsychotics, those with a history of alcohol abuse or cognitive impairment. Patients used either vial/syringe or InnoLet for 12 weeks, and then switched to the alternate treatment for 12 weeks. At the end of each treatment period, patients completed the Problem Areas in Diabetes (PAID, 20-items on a 6-point Likert scale; higher scores represent more serious problem areas) and Fear of Self-Injection Questionnaires (8-items on a 4-point Likert scale; higher scores represent greater fears). *Results*: Of the entire cohort, 165 patients completed the study, 91 (55%) were in the vial/syringe-to-InnoLet treatment group. No significant differences in baseline characteristics were observed in either treatment group. Of the 165 patients, 145 completed the PAID and 160 completed the Fear of Self-Injection questionnaire in both treatment periods. After using InnoLet, patients scored lower on 17/20 PAID items, indicating a lower degree of feeling discouraged, scared, deprived, depressed, overwhelmed, angry, and unsupported (Wilcoxon, $p < 0.05$). Patients reported significantly lower fear of self-injection after using InnoLet vs. vial/syringe (Mean ± SEM: 9.4 ± 0.2 vs. 11.0 ± 0.4; $p < 0.0001$). *Conclusions*: A reduction in problem areas and less fear of self-injection may be clinically significant, as patients may better manage their diabetes while using InnoLet delivery system.

P-354/1605/CROSS-CULTURAL VALIDITY AND RELIABILITY OF HEALTH UTILITY INDEX 3 IN-PATIENTS WITH HIV

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Aims: New HIV treatment strategies have transformed the disease into a chronic state with an increased risk of treatment's toxicity. Hence, it is recognized that improving patient's quality of life (QOL) should be part of the HIV infection treatment goal. In the absence of suitable instrument, this study aimed to assess the cross cultural validity and reliability of Health Utility Index (HUI3) in UK HIV population. *Methods*: The study was approved by local research ethics committee. All adult patients receiving HIV care in Cardiff were approached in the out-patient clinic and recruited into the study after giving written informed consent. Participants were required to complete the HUI3. Variables analyzed include QOL score, CD4+ category, HIV stage, and viral load using Spearman's rank test, Kruskal–Wallis and Mann–Whitney *U* test. *Results*: In total, 103 (98%) of participants completed the questionnaire. The average age of the participant was 40.8 years (±10.7SD) and 81 were male. HUI3's was found to be reliable in most attributes (Cronbach's α 0.68), except in vision, hearing and ambulation. Four attributes (ambulation, emotion, cognition and pain) correlated significantly with QOL score ($p < 0.002$) after controlling for antiretroviral use, clinical, and CD4+ categories. Findings also revealed no significant difference and correlation between QOL score and CD4+ count, viral load count and HIV clinical categories. There appears to be a stronger correlation ($r = -0.193$) and mean difference ($p = 0.083$) between QOL score and antiretroviral use but this did not reach statistical significance. An interesting pattern was observed whereby asymptomatic patients (CDC A) and those not using antiretroviral (ARV) therapy had a lower QOL score than AIDS patients (CDC C). *Conclusions*: The findings of this study support validity and reliability of HUI3 in UK HIV population and could therefore be used with confidence in comparative study of HIV treatment. The results also suggest benefit of ARV use in improving patient QOL; however this requires further investigation in a controlled study.