

grafts, angioplasty, haemodialysis and diabetes were “lumped” together for analysis. We re-evaluated the data by meta-analysing sub-groups of trials according to the risk factor of the patient population (where there was more than one trial for the risk factor). **RESULTS:** The Relative Risk Reductions with [95% CI] for DP + ASA compared to ASA alone for all types of patients was calculated to be 5% [-5 to 15%]. However the RRRs were diverse when trial patient populations were split for analysis. RRRs ranged from 15% [4% to 26%] for patients with previous Stroke/TIA to -19% [-62% to 12%] for patients who had had CABG previous to entering the study. **CONCLUSIONS:** The usefulness of the ATC’s summary statistics in decision-making for specific patient populations is limited, due to heterogeneous patient populations being combined together. In particular, our sub-group analysis revealed a statistically significant RRR in vascular events for patients treated with DP + ASA compared to ASA amongst patients with previous TIA/stroke.

**MD4**

**STOCHASTIC ANALYSIS OF AN RANDOMIZED CONTROLLED TRIAL IN REHABILITATION OF LOW BACK PATIENTS: REPRESENTATION OF UNCERTAINTY WHEN EFFECT DIFFERENCE IS SMALL**

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**OBJECTIVE:** Various representations of uncertainty in cost effectiveness analysis alongside a randomized trial have been suggested. Due to its informational richness the cost acceptability curve has been favored. Alternative representations of uncertainty are confidence intervals and bootstrap distribution in the *c/e* plane. If the difference in effects is small different problems arise with either of the methods. Aspects of using the different presentations of uncertainty for decision making are discussed for the study example. **METHODS:** Methods compared included cost-effectiveness acceptability curve bootstrap confidence intervals and bootstrap scatter plots focusing on their user-friendliness, informational richness and guidance for decision making. Data came from an economic evaluation in the rehabilitation of low back patients that has been performed in two German rehabilitation centers. Treatment in the standard arm consisted of a multimodal program including physiotherapy and educational measures. The experimental group received additional psychological treatment. **RESULTS:** The cost effectiveness acceptability curve intersecting at 0.61 showed a small slope. The bootstrap confidence interval ranged from €1.4 million to €-20.000 covering points in all quadrants. 61% of the bootstrap replicates where in the southeast quadrant indicating dominance. **CONCLUSIONS:** Suggestions are made for further discussion of using uncertain results for decision making as a conservative rule for

a risk-neutral decision maker, it is suggested that a 50% probability of the intervention being dominant (as found in the study) may not be used to reject it on economic grounds.

**SESSION II****VALUES AND VALUATION II****VV5**

**ASTHMA TREATMENT PREFERENCE STUDY—A CONJOINT ANALYSIS OF PREFERRED DRUG TREATMENTS**

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**OBJECTIVE:** Assessment of patient preferences for attributes of asthma treatments. **METHODS:** Two hundred ninety-eight patients, aged 18–60, from 15 centres in Sweden completed a questionnaire concerning their asthma and ranked 18 alternative treatments using conjoint analysis. Patients were treated with either inhaled corticosteroids (ICS) or short acting bronchodilator alone (n = 123) or ICS and long acting bronchodilator (separate inhalers n = 87, combination inhaler n = 88). Attributes analysed were: maintenance treatment, additional reliever, time to onset and duration of reliever, number of symptom-free days (SFD) per month, and out-of-pocket cost per month. **RESULTS:** Conjoint analysis showed that the most important aspect of treatment was SFD. Forty percent of the patients had 15 or less SFD per month. Eighty-five percent of the patients preferred another treatment than their current treatment. Treatment preferences were heterogeneous and in 78% not covered by current treatment guidelines. One of two patients preferred a combination inhaler to separate inhalers, and three of four patients a reliever that is both rapid- and long-acting. The most preferred treatment was a combination inhaler for maintenance and reliever use. On average, the patients were willing to pay SEK 328 (USD \$36), additionally to their current expenditure, per month for the change to the preferred treatment. **CONCLUSION:** Symptom-free days were the most important attribute in asthma treatment. Patients were willing to pay for a switch to their preferred treatment. The most favoured treatments were a reliever therapy that is both rapid- and long acting and a combination inhaler for both maintenance and as needed use.

**VV6**

**TRANSFORMING THE UNIFIED PARKINSON’S DISEASE RATING SCALE INTO A UTILITY SCALE**

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**OBJECTIVES:** To develop a quantitative algorithm that transforms the Unified Parkinson's Disease Rating Scale (UPDRS), which is the most frequently used instrument to evaluate different clinical dimensions of Parkinson's Disease (PD), into EuroQoL (EQ-5D) values. **METHODS:** A total of 157 PD patients (mean age: 67 yrs., 63% male, mean total UPDRS: 44, mean EQ-5D: 0.74) were recruited in a prospective study at a German movement disorders center. Both EQ-5D and UPDRS were evaluated at baseline in 124 patients. Spearman correlation coefficient (R) was used to test whether total UPDRS score, sub scores (U2,U3,U4), and other patient characteristics were univariately associated with EQ-5D. A transformation algorithm with UPDRS sub scores as predictors and EQ-5D as outcome was derived using multivariate regression analysis. Goodness-of-fit was determined by adjusted R-square and the Hosmer-Lemeshow method. **RESULTS:** In the univariate analysis, all UPDRS sub scores were significantly ( $p < 0.05$ ) correlated with clinical stage on the Hoehn & Yahr (HY) scale. Significant inverse correlation (all  $p < 0.001$ ) was found between EQ-5D and total UPDRS ( $R = -0.67$ ), U2 ( $R = -0.63$ ), U3 ( $R = -0.60$ ), U4 ( $R = -0.59$ ), and HY stage ( $R = -0.52$ ). Multivariate analysis showed that 52% of the variance in EQ-5D could be explained by the following equation:  $EQ-5D = (99.62 - 1.36 \times U2 - 0.13 \times U3 - 1.66 \times U4)/100$ . The Hosmer-Lemeshow test showed good predictive power. Using different mathematical functions (e.g., log, logit, square) of predictors, utilities or disutilities, and inclusion of interaction terms did not substantially increase adjusted R-square. **CONCLUSIONS:** We suggest a simple, parsimonious, and easily feasible algorithm for the transformation of UPDRS scores into EQ-5D-based utilities. The purpose of this function is not to predict individual quality of life, but mean utilities for populations with a specific UPDRS configuration, which may be used in the evaluation of intervention's overall effectiveness or cost-effectiveness. This algorithm can be applied to existing UPDRS data sets and used in cost-utility analyses of health technologies.

VV7

#### WILLINGNESS TO PAY FOR HEARING AIDS IN THE NETHERLANDS

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**OBJECTIVE:** To measure the maximum willingness to pay (WTP) for a hearing aid (HA) in the Netherlands in both hard of hearing persons and persons accompanying them. **METHODS:** In a survey 151 clients and 55 persons accompanying them were asked about their maximum WTP for a HA, the out of pocket (OoP) payment for the HA(s) currently fitted, and some perceptions about the reimbursement of HAs, when visiting their HA dispenser. **RESULTS:** The mean age of the clients was 70 years, and of the accompanying persons 62 years. In both groups approximately 50% was male, 20% earned an income

below €1150 and 7% an income above €3400, and two third were compulsory insured. Most accompanying persons were either the partner (63%) or a child (24%) of the client. The mean OoP payment for the current HA(s) fitted was €461 (sd 392) per HA. Of both the clients and the accompanying persons 46% found it unjust to some extent to pay any OoP contribution for a hearing aid. Over 90% of the clients and the accompanying persons perceived that abolition of the reimbursement would be very problematic. Mean maximum WTP per HA was €277 (sd 296) for the clients and €207 (sd 264) for the accompanying persons. **CONCLUSION:** It can be concluded that there is considerable aversion to an increase of OoP payments as a result of the abolition of the reimbursement. Mean maximum WTP found in this study is considerably lower than the figure observed in a US study: \$982 per HA (Chisolm & Abrams, 2001). Mean maximum WTP per HA is also lower than the actual OoP contribution for the HAs currently fitted. This might reflect the difference between revealed and stated preferences, or may be a result of shifted preference.

VV8

#### CLINICAL INCONTINENCE SCORE RELATES TO HEALTH UTILITY VALUES

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**OBJECTIVE:** The Vaizey score is a tool to assess the severity of faecal incontinence and to determine treatment effect. As clinicians develop the score, it may not reflect the overall health impact of faecal incontinence. This study investigates the association between the Vaizey score and health-related utility before patients received treatment. **METHODS:** Baseline data from a prospective diagnostic cohort study were used to evaluate the incontinence score and the health utility of patients. The Vaizey score (0 (continent)—24 (totally incontinent)) consists of items concerning the type (solid, liquid, gas) and frequency of faecal incontinence, the use of pads and constipating medication, and the amount of social invalidation. Health utility was calculated by a simple additive model using EuroQoL5D data on mobility, self-care, daily activities, pain/discomfort and anxiety/depression. **RESULTS:** Data from 89 (13 men; mean age 59) patients were analysed. On average, patients suffered from incontinence for 8.7 years, the mean Vaizey score was 18.5 and mean utility 0.82. Lower Vaizey scores coincided with higher health utility values (Spearman's  $r = -0.316$ ,  $p < 0.01$ ). Patients indicating any problems on a EuroQoL dimension showed higher Vaizey scores than patients without problems; however, this was only significant for daily activities (Mann-Whitney  $U = 597.5$ ,  $p < 0.001$ ) and anxiety/depression (Mann-Whitney  $U = 685$ ,  $p < 0.05$ ). **CONCLUSION:** Before treatment the Vaizey score was significantly correlated with total utility and was associated with two dimensions of the EuroQoL: daily activities and anxiety/depression. Further studies will investigate