at baseline compared to the NSAID group. After adjusting for these factors, no significant differences were observed in the rate of GI events (1% overall), rate of GI medication use (5%) total health care costs (mean = $1712), or medical costs (mean = $1513) after 1 year. Prescription drug costs were 38% and 51% higher for rofecoxib and celecoxib patients respectively compared to the NSAID group ($p < 0.0001$). **CONCLUSION:** In contrast to initial marketing information, in this observational study, we found no significant difference in GI-related outcomes or total health care costs between the two groups.

PAR7

HEALTH CARE UTILIZATION AND EXPENDITURE OF TWO PROGRAMS FOR OSTEOARTHRITIS OF THE KNEE AND HIP: ASSESSMENT AND IMPACT IN REAL-LIFE CONDITIONS

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OBJECTIVE: To assess in real-life conditions after previous randomized controlled trials the impact on health care utilization and expenditure of two self-management programs for older adults with osteoarthritis (OA) of the knee and hip. **METHODS:** Eighteen primary health-care providers were recruited to carry out a Knee or Hip program. Study participants were older adults (>55 years) with diagnosed OA of knee or hip. Self-reported data were collected with pre-test/post-test questionnaires (consultation of the general practitioner, physiotherapeutic treatment, consultation of the medical specialist, and use of OA medication). Pre-test/post-test data of four health insurance companies were collected on expenditure for physiotherapy and OA medication. **RESULTS:** Providers delivered 20 Knee and 20 Hip programs. Background variables of program participants were comparable with background variables in the RCTs. Significant fewer participants of the Knee program (n = 157) reported receiving physiotherapy after completion of the program (P = 0.00). In the Hip program (n = 132), the self-reported frequency of visits to physiotherapists (P = 0.00) and medical specialists (P = 0.03) decreased. The self-reported use of OA medication had decreased in both programs (P = 0.00). No effect was observed for consultations of the general practitioner. The outcomes were comparable with the outcomes of the RCTs. Expenditure for physiotherapy and OA medication could not be assessed, due to difficulties in obtaining sufficient reliable data. Expenditure were not measured in the RCTs. **CONCLUSION:** Considering the limitations of the study, both programs indicate ecological validity as to health care utilization. Compared to the RCTs, the programs produced similar outcomes in real-life conditions. The combination of the self-reported reduction in the use of physiotherapy and the self-reported reduction in the use of OA medication indicate also improved OA symptom control. A guideline for accurate data collection on OA expenditure is recommended. Cost-utility and cost-effectiveness analysis is recommended, once large-scale dissemination in the primary health care system is realized.

PAR8

COST COMPARISON OF THE COMBINATION TRAMADOL PLUS PARACETAMOL VERSUS NSAIDS PLUS PROTON PUMP INHIBITORS IN THE TREATMENT OF OSTEOARTHRITIS IN THE NETHERLANDS

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OBJECTIVES: Non-steroidal anti-inflammatory drugs (NSAIDs) are often used as first-line treatment in osteoarthritis (OA). Due to the increased risk of gastrointestinal (GI) side effects with NSAIDs, proton pump inhibitors (PPIs) are often prescribed concomitantly, but cannot entirely prevent these complications. Since the combination of the weak opioid tramadol plus paracetamol has shown to be an alternative treatment in OA we aimed to compare the costs of six months' treatment of OA with NSAIDs plus PPIs with the tramadol/paracetamol combination (Zaldiar®) in the Dutch health care setting. **METHODS:** A cost comparison of the direct medical costs was appropriate since both treatments have been shown to be similarly efficacious in treatment of OA pain of comparable intensity. We combined the Celecoxib Outcomes Measurement Tool (COMET) for evaluation of cost consequences of NSAIDs plus PPIs with a modified model for cost consequences of the tramadol/paracetamol combination presented previously. The NSAIDs under study were diclofenac and ibuprofen and the PPIs were omeprazole and pantoprazole, representing 75% and 85% of the respective market shares (by units) in The Netherlands. Probabilities were derived from published literature. Resource utilization data were obtained from published literature, Delphi panel and official price and tariff lists (Dutch costing manual). The perspective taken was that of the health insurance. **RESULTS:** Costs of six months' treatment of OA pain with the tramadol/paracetamol combinations were €244.45. Savings compared with NSAIDs plus PPIs treatment were €72.87. Taking into account the rare, but very cost-consuming, renal side effects of NSAIDs, savings were €414.79 for six months' treatment (costs of NSAIDs plus PPI treatment: €317.32, including renal side effects: €659.24). Sensitivity analyses confirmed the robustness of the model. **CONCLUSION:** The tramadol/paracetamol combination offers a cost-saving alternative treatment of OA that is not associated with severe GI or renal complications.

PAR9

A MODEL TO ESTIMATE HEALTH UTILITIES INDEX MARK 3 UTILITY SCORES FROM WOMAC INDEX SCORES IN PATIENTS WITH OSTEOARTHRITIS OF THE KNEE

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OBJECTIVE: To develop a model to translate WOMAC scores collected in clinical trials of patients with osteoarthritis (OA) into Health Utilities Index Mark 3 (HUI3) utility scores for application in economic evaluation. **METHODS:** Data from a previously published open-label randomized controlled trial of appropriate care with hylan G-F 20 vs. appropriate care without hylan G-F 20 in 255 outpatients with knee OA. We estimated linear regression models of HUI3 scores using various functions of WOMAC, demographics and clinical variables. Out of sample predictive performance of the models was assessed using the mean absolute error and several other criteria. **RESULTS:** The preferred model included WOMAC pain, stiffness, function subscales, and demographic variables; it accounted for almost 40% of the variation in the HUI3 utility scores. At the group level, absolute differences between predicted and actual overall HUI3 utility scores was <0.001 and not statistically significantly different from zero. **CONCLUSION:** A model appropriate for retrospective analyses of data sets in which utility scores were not collected was developed to estimate HUI3 scores from WOMAC

scores for application in OA. Researchers can estimate overall utility scores, compute QALYs, and perform cost-utility analyses within a defined range of uncertainty.

PAR10

ARE THEY RELEVANT? A CRITICAL EVALUATION OF THE INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH CORE SETS FOR OSTEOARTHRITIS FROM THE PERSPECTIVE OF PATIENTS WITH KNEE OSTEOARTHRITIS IN SINGAPORE

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OBJECTIVES: To determine the extent to which health items identified from the perspective of patients with knee osteoarthritis can be linked with the ICF; and to critically evaluate the ICF Comprehensive and Brief Core Sets for osteoarthritis. **METHODS:** Items identified from a focus group study were linked independently by two researchers based on the 10 *a priori* linking rules. Both percentage agreement and kappa statistics were calculated to measure inter-observer agreement. Any disagreements were resolved by reaching a consensus among the researchers. The categories linked with all items were compared with the Comprehensive Core Set for osteoarthritis, while the categories linked with those items reported as important by over 30% of subjects within each of 3 local ethnic groups (i.e. Chinese, Malay, and Indian) were compared with the Brief Core Set. Both comparisons were made only at the second level of the ICF. **RESULTS:** Totally 74 items were linked with 44 different ICF categories through 105 linkages with generally very good inter-observer agreement. The 69 items were linked with the ICF at the third or fourth levels. Both commonalities and disparities were found through comparison between the categories linked with these items and both Core Sets for osteoarthritis. **CONCLUSIONS:** In this study, all items could be successfully linked with the ICF. The ICF Comprehensive Core Set demonstrated general conceptual validity, while the Brief Core Set needs to be supported by more empirical evidence in various socio-cultural contexts. This study specifically complemented the development and refinement of both Core Sets from the perspective of patients with knee osteoarthritis.

PAR11

VALIDITY STUDIES AND SATISFACTION THRESHOLD OF THE ARTHRITIS TREATMENT SATISFACTION QUESTIONNAIRE (ARTS)

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OBJECTIVE: The 18-item ARTS questionnaire measures 4 dimensions relative to satisfaction with osteoarthritis treatment: Effectiveness, Convenience, Tolerability, and Medical Care. Validity studies and discriminant properties are reported in order to establish a clinical relevant difference in the overall score and a satisfaction threshold. **METHODS:** Two samples are compared: a normative group of 163 used for linguistic validation and an unsatisfied group of 1750 patients derived to a more tolerated treatment with COX-2. Groups are compared using t-test, ANOVA and Tukey's HSD. Sensitivity and related figures are estimated using the ROC curve using as criteria the patients' need of change in treatment (judged by the clinician). **RESULTS:** The normative group renders a normal distribution of scores (65.4 + 13.4, mean + SD), slightly biased above the 0–100 scaled mid-point. The total score mean value for the unsatisfied sample (52.5 + 11.1) was significantly lower ($p < 0.001$) than for the normative group, and much lower than the satisfied subgroup (76.5 + 13.9). By dimensions, the larger difference between the satisfied subgroup and the rest of patients who needed change was observed in the Effectiveness dimension (dif = 34.1, t = 11.3), followed by Convenience (dif = 27.3, t = 10.1), Tolerability (dif = 26.5, t = 5.3), and Medical Care (dif = 14.0, t = 5.7). No differences were found between genders, neither in the normative group nor in the unsatisfied group. Sensitivity = 72%, specificity = 77%, positive predictive value = 89% and negative predictive value = 53% are obtained using a cut-off point of 69.18 determined from the clinical judgment of a need of change in treatment (threshold value). Significance differences in mean score are also found between groups differing in tolerance to actual treatment. **CONCLUSION:** ARTS is a sensitive instrument and can be used to detect differences in the patients' satisfaction with osteoarthritis treatment. Differences between groups of known satisfaction level are significant and meaningful, although it should be noted that the normative mean score is above the scale midpoint.

PAR12

IMPROVEMENT IN HEALTH UTILITY IN PATIENTS WITH PSORIATIC ARTHRITIS TREATED WITH ADALIMUMAB (HUMIRA®)

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OBJECTIVES: To estimate change in quality of life (QoL) in patients with psoriatic arthritis (PsA) receiving adalimumab vs. placebo, as measured by the health utility measurement Short Form 6D (SF-6D). **METHODS:** In a placebo-controlled, Phase III trial of adalimumab (ADEPT), patients with active PsA received adalimumab 40 mg every other week (eow) or placebo for 24 weeks. The SF-6D was estimated at baseline, 12 weeks and 24 weeks using responses to the Short Form 36 (SF-36) patient questionnaire. Multiple linear regression models were estimated to explore the effects of age, sex, disease duration, concomitant therapies, baseline Health Assessment Questionnaire Disability Index (HAQ DI), and the Psoriasis Area and Severity Index (PASI). Patients were further differentiated as responders or non-responders using the Psoriatic Arthritis Response Criteria (PsARC) and an improvement in the PASI by 75% (PASI 75). **RESULTS:** Baseline SF-6D values were 0.66 and 0.65 for the adalimumab and placebo arms respectively. Overall, adalimumab improved health utility by 10.6% (SD = 18.9) in comparison to 2.9% (SD = 16.2) for placebo. Adalimumab was particularly efficacious in patients with skin involvement (13.7% (SD = 20.9) versus 0.5% (SD = 17.0)). PsARC response was a significant predictor of utility improvement, and, for patients with skin involvement, PASI 75 was also important **CONCLUSIONS:** These findings demonstrate that adalimumab was efficacious in improving PsA patients' quality of life; and this efficacy was observed to an even higher degree in patients with more skin involvement. Health utilities, when modeled with associated costs over a patients' lifetime, will facilitate the economic evaluations of adalimumab.

PAR13

THE DIRECT MEDICAL COST OF RHEUMATOID ARTHRITIS IN HONG KONG

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