AN ECONOMIC EVALUATION OF THE COST OF EDEMA AND SYSTOLIC BLOOD PRESSURE DESTABILIZATION IN COX-2-TREATED PATIENTS WITH OSTEOARTHRITIS AND HYPERTENSION
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OBJECTIVES: To perform an economic evaluation on the short-term costs of managing edema and hypertension in COX-2-inhibitor-treated patients with osteoarthritis (OA) and hypertension (HTN).

METHODS: Two randomized clinical trials (RCT) in OA/HTN patients showed a significantly higher incidence of systolic blood pressure (SBP) destabilization (8.7% to 15.6%; RR = 0.61, p < .001); edema (4.8% to 8.5%, RR = 0.67, p = 0.04), and both SBP/edema (0.6% to 2.2%; RR = 0.28, p = 0.003) for rofecoxib 25 mg/day (n = 942) compared to celecoxib 200 mg/day (n = 960). The RCT results were projected onto a typical US managed-care organization (MCO) population using: (1) the age distribution from a large MCO; (2) age- and gender-specific prevalence of OA and HTN from US government data; (3) age-specific incidence of cardiorenal events from pooled RCT data, and (4) prevalence of COX-2 inhibitor use in a large insurer. We determined resource utilization and treatment patterns from the published literature and an expert physician panel. Costs were obtained from standardized databases and published literature.

RESULTS: For a population of 1,000,000 MCO members, 8% of members (n = 79,903) are projected to have OA and HTN, while 2.2% of members (n = 21,594) have OA/HTN and use a COX-2 inhibitor. From the analysis, the number of additional events predicted to occur with rofecoxib (relative to celecoxib) are: SBP destabilization (n = 1144); edema-alone (n = 453); edema and SBP destabilization (n = 345). The total cost savings of treatment with celecoxib would be $474,007. Translated into other parameters, the cost savings from the celecoxib usage would be $1.83 in per patient per month costs, and $0.24 in the daily cost of COX-2 inhibitor use for an average patient.

CONCLUSION: The short-term management of SBP destabilization and edema adds to the cost of rofecoxib treatment, relative to celecoxib. Clinicians and payers should not ignore the clinical effects and economic impact of arthritis medications on blood pressure and edema.

RA is a chronic disease that affects 0.5 to 1% of the population. The economic impact of RA on individuals and society is enormous and the costs of RA rise steeply with disease severity. A therapy that reduces disease progression could be expected to lead to reductions in resource use as well as maintaining quality of life.

OBJECTIVE: To estimate the costs and consequences of adding infliximab to the care of patients with severe rheumatoid arthritis (RA) already being treated with methotrexate.

METHODS: Estimates of the impact of infliximab on disease progression were obtained from the ATTRACT trial in which 428 RA patients were randomly assigned to methotrexate or methotrexate plus infliximab. Since patients in the ATTRACT trial were followed for only 54 weeks, we developed a Markov model in order to estimate the long-term consequences of RA. The model was based on a cohort (ARAMIS) involving 4258 consecutively enrolled RA patients followed in nine centres in USA and Canada. Markov health states were based on the Health Assessment Questionnaire and on drug treatment. For the first year, costs were calculated using the resource utilization by UK patients in the ATTRACT trial and applying UK unit costs. Long-term costs were obtained from the Norfolk Arthritis Register (NOAR) cohort. Utilities were based on visual analogue scale assessments in ATTRACT (first year) and ARAMIS (long-term).

RESULTS: In the base-case analysis, the incremental cost per QALY of infliximab was £33,618. Assuming radiograph stabilization of joint disease for patients treated with infliximab after the first year of treatment (as suggested in the long-term data from the ATTRACT trial) the cost-effectiveness ratio falls to £5111 per QALY. Sensitivity analyses were performed to allow for uncertainty in some of the estimates.

CONCLUSION: Infliximab is likely to be a cost-effective treatment for patients suffering from severe RA.
OBJECTIVES: To examine the disability and resource utilisation associated with osteo- and rheumatoid arthrits in five European countries.

METHODS: A large international database was examined to evaluate the disability and resource use in patients with rheumatoid and osteo-arthritis. The database included the Health Assessment Questionnaire (HAQ) Disability Index, questions on satisfaction and questions on resource utilisation and lost work time.

RESULTS: The Arthritis Disease Specific Programme, held by Adelphi Ltd, was used as the database for this study. It contains 4580 patient records, 4203 of which have self-reported HAQ data. HAQ data are reported for France (n = 609), Germany (n = 1079), Italy (n = 796), Spain (n = 1229), and the UK (n = 490). Patients with rheumatoid arthritis (n = 2022) consistently demonstrate more disability than those with osteoarthritis (n = 1836) (HAQ DI: 1.03 vs 1.01, respectively). Patients in the UK had the most RA and OA disability (HAQ DI 1.60 and 1.20, respectively). Within disease diagnoses, females had greater disability (1.08 vs 0.90 RA; 1.05 vs 0.95 OA). Patients with RA tend to have more GP and specialist visits over six months compared to those with OA (3.30 and 1.79 vs 3.26 and 1.41), although OA patients tend to have more ED visits (0.14 vs 0.07). Self-reported days off work over six months were also greater for RA patients (25.4 vs 20.24). The greatest work absences were seen in the UK (RA: 45.00; OA: 41.10) and the least days off work were seen in Italy (RA: 7.09; OA: 4.24).

CONCLUSIONS: OA and RA have large impacts on disability and resource utilization in the European countries we examined. Although debilitating, the extent to which resources are consumed and work lost varies greatly from country to country. From this cross-sectional international database, RA patients have greater disability compared to OA. This is reflected by higher disability, greater resource utilisation, and more days off work.

PSYCHOMETRIC VALIDATION OF THE ARTHRITIS TREATMENT SATISFACTION QUESTIONNAIRE (ARTS)
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OBJECTIVE: To examine the reliability and validity of a new French questionnaire assessing patient satisfaction with their osteoarthritis (OA) treatment.

METHODS: Item generation: Semi-structured interviews were performed among 20 osteoarthritis (OA) patients and 10 clinicians. Interviews were recorded, transcribed and analyzed. Content validity and cognitive debriefing of the first version of the Arthritis Treatment Satisfaction (ARTS) questionnaire was evaluated by 10 OA patients. Validation study: Principal component analysis, multi-trait analysis, internal consistency (Cronbach’s alpha) and known-group validity were performed on a cross-sectional sample of 797 OA patients. Test-retest was assessed on 133 clinically stable OA patients. Test-retest reliability was estimated with the Intraclass Correlation Coefficient (ICC).

RESULTS: Patients were on average 67.5 years old (SD = 10.4), 64.5% were women, 26% had OA of the hip, 58% had OA of the knee, and all patients had suffered from OA for an average of 7 years (SD = 6.4). The resulting ARTS questionnaire comprised 18 items consisting of a clear four dimensional structure measuring advantages of treatment, treatment convenience, apprehensions about treatment and satisfaction with medical care. Scores were calculated using the mean of items in each dimension. Cronbach’s alpha ranged from 0.63 for treatment convenience to 0.86 for advantages of treatment. ICC ranged from 0.61 for advantages of treatment to 0.75 for treatment convenience. ARTS significantly differentiated patients according to the presence of side effects, regular practice of physical activity, perceived pain and indices of severity.

CONCLUSION: Results provide evidence for the good psychometric properties of this first treatment-satisfaction questionnaire specific to osteoarthritis. The responsiveness of the ARTS questionnaire over time is still to be documented.

ECONOMIC ANALYSIS OF THE GUIDELINES FOR THE MANAGEMENT OF CORTICOSTEROID-INDUCED OSTEOPOROSIS IN RESPIRATORY PATIENTS
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OBJECTIVE: To evaluate the economic efficiency of management guidelines for corticosteroid-induced osteoporosis and establish whether it is more economically efficient to modify the guidelines when targeting respiratory patients.

METHODS: Data were collected from GP medical records related to osteoporosis risk factors and corticosteroid use in the previous year. Sample data were used for economic modelling based on population data and costs from literature. Three strategies were evaluated: the existing guidelines; modified guidelines; treatment without reference to guidelines. Main outcome measures were net discounted cost per fracture averted and net discounted cost per quality adjusted life year (QALY) saved.

RESULTS: A cohort of 110 (71 women) adult patients prescribed oral and/or inhaled corticosteroids was identified. Following existing guidelines averted 0.5 fractures and saved 0.1 QALYs at a net total cost of £5,943. The resultant cost per fracture averted is £12,306 and cost per QALY saved is £40,356. When modified, to include intermittent oral and inhaled corticosteroid use as risk factors, the net total costs increased to £30,190, with 3.6 fractures averted and 1.1 QALYs saved resulting in a cost per fracture averted of £8,419 and cost per QALY saved of £27,854, representing greater economic efficiency. Fur-