strategy can be adjusted. It is assumed that control of disease activity avoids or reduces signs and symptoms in the short term, and reduces the development of joint damage and disability in the long term.

Objectives To study if the decision-support system is effective in a) reducing disease activity, and b) maintaining the level of joint damage and disability in RA patients.

Methods 264 RA patients from 63 rheumatologists were included in a longitudinal evaluation, starting with a 3 month control period P0 (no feedback) followed by a 12 month intervention period P1 (with provision of feedback). Patients are nested in physicians, crossed with time nested in period. The main outcome variable is the Rheumatoid Arthritis Disease Activity Index (RADAI), a questionnaire on signs and symptoms in RA. The RADAI ranges from 0–10, higher scores indicate more disease activity. Disease activity (DAS28), disability (HAQ), and joint damage (X-ray score) were additionally measured in P1. To compare the development of the RADAI in P0 with P1, multilevel analysis (linear regression with random coefficients) was used; the unit of time is 30 days. For analysing differences in P1 for DAS28, HAQ and X-ray score, the paired t-test was used.

Results All patients had at least 1 feedback report at start of P1, 40% had 2, 23% had 3–6 reports. The regression model shows no time effect for RADAI in P0: -0.02 ($p = 0.75$) and a small time effect in P1: -0.04 ($p < 0.0001$). The latter means ca. -0.5 RADAI point in 12 months. The difference between P0 and P1 is significant ($p = 0.0011$). The time effects were not influenced by: age, gender, disease duration, baseline level of disease activity, number of consultations, or changes in DMARD therapy. Of the 202 patients on DMARD therapy during P1, $n = 114$ had the same therapy at begin and end. Over P1, the DAS28 was reduced with -0.4 (1.2) points ($p < 0.0001$), the HAQ remained stable with -0.1 (0.4) points ($p = 0.03$), and the X-ray score increased with $+6.4$ (10.4) points ($p < 0.0001$).

Conclusion These results point to a significant but small effect of a decision-support system in reducing disease activity in RA. Over 12 months, the medication strategy was changed in only a minority of patients. The SCQM may increase its efforts to stimulate physicians to adjust treatment, e.g. by the implementation of explicit treatment guidelines. Other possible reasons for sub-optimal effectiveness need to be explored, including limited treatment options and medication compliance.

SAT0237 THE DEVELOPMENT AND VALIDATION OF A MARKOV MODEL FOR THE ECONOMIC EVALUATION OF (NEW) TREATMENTS IN RHEUMATOID ARTHRITIS

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Background Due to the scarcity of resources (new) treatments need not only to prove that they are effective, but also cost effective. Especially in the case of new more costly treatment options as for rheumatoid arthritis, establishing the cost-effectiveness is relevant. Sometimes data about the costs and effects (in the long term) are absent, especially in the case of new treatment options. A method to overcome the problem of incomplete data and to extrapolate short-term endpoints to long-term outcomes is modelling.

Objectives To develop and validate a Markov model for the economic evaluation of (new) treatments in RA.

Methods A Markov model was developed with a cycle time of 3 months and a time-horizon of 5 years. In a Markov model patients are classified in a number of states (Markov states), defined by the severity of the disease. Development of the disease is defined as transitions between these states. Markov states were defined using the Disease Activity Score (DAS), and were valued in utility and medical and total costs using a dataset from a 48-week trial with methotrexate. The model was calculated for 'usual care' for patients in the first 5 years of their disease, using transition probabilities calculated from the 5-years follow-up data of patients participating in an open prospective study of early (disease duration < 1 year) RA. To test the validity of the model, the structure of the model, the inputs of the model, the results of the model, and the value of the model to the decision-maker were assessed.

Results The costs and the utility showed a clear relation with the Markov states. The expected medical and total costs per patient over 5 years were DFL. 14.896, and DFL 27.889 respectively and the expected Quality Adjusted Life Years (QALYs) were 3.27. Differences in patient characteristics like age, gender, disease duration, used DMARDs, number of underwent orthopaedic procedures, and education had a moderate effect on the valuation of the Markov states in costs and utility. The input data for the Markov model was appropriate for the Dutch situation. The expected total costs seemed somewhat lower than the costs found in another Dutch study in the first six years of the disease, but the mean utility was comparable to utilities found in other studies. It appeared possible to validly extrapolate the course of the disease over 5 years with the Markov model, using transition probabilities calculated from only the first year of follow-up of the patients in the open study. In this study the value of the model for the decision-maker could not be well established.

Conclusion The developed Markov model is valid for use in economic evaluations in RA.

SAT0238 THE COST OF OSTEOARTHRITIS AND ITS ASSOCIATION WITH THE SEVERITY OF THE DISEASE

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Objectives To assess the cost related to caring for Osteoarthritis (OA) patients in Italy and to verify any association between cost and severity expressed in terms of Lequesne Index (LI) score.

Methods The analytic framework of the present study was a prevalence-based Cost of Illness Analysis. The societal perspective was adopted with a 6 months time horizon. Subjects: Eleven rheumatologic centres were selected all over Italy. These recruited and interviewed the first 30 consecutive OA patients presenting to their office with a diagnosis of knee osteoarthritis. To this purpose, a questionnaire was developed so to collect information about: demography, concomitant localisation of OA, LI score, direct and indirect costs. The severity of the disease was assessed at the time of the visit. To investigate the association between cost and severity we used multivariate linear regression techniques.

Results A total of 277 patients were recruited and interviewed. The average age was 65,7 ($\pm 9,8$) years, the average LI score