the economic impact of rheumatoid arthritis alone is substantial with the indirect productivity or income loss as large as the health care costs.

**PMS21**

**THE RELATIONSHIP BETWEEN COST OF ILLNESS AND DISEASE SEVERITY IN RHEUMATOID ARTHRITIS: RESULTS OF A SYSTEMATIC REVIEW**

Richard L, Brown M

UCB Celltech, Slough, Berkshire, UK

**OBJECTIVE:** To assess the relationship between economic burden and physical functioning or disease severity in rheumatoid arthritis (RA). METHODS: Medline, Embase, BIOSIS, Derwent Drug File, the Cochrane library and NHS-EED were searched on 12th March 2007 for cost-of-illness (COI) and cost-effectiveness studies in RA. RESULTS: A total of 909 unique citations were retrieved. Nine studies presented COI results; with seven studies presenting data on the relationship between direct and indirect costs and physical functioning or disease severity. The Health Assessment Questionnaire (HAQ) was used in three studies to assess functional ability. Higher HAQ scores at baseline were found to be significant predictors of higher future direct costs in two studies. A third study used both HAQ and the Hannover Functional Status Questionnaire (FFbH) to assess functional ability. For patients with an HAQ score <1.2 (or >70% of full FFbH function) the mean annual direct costs were €3225 and indirect costs were €8,811; for patients with an HAQ score between 1.2 and 1.7 (FFbH function of 50 to 70%) mean annual direct costs were €5,661 and indirect costs were €21,580; whilst for patients with an HAQ score higher than 1.7 (FFbH functional status of <50% of normal) mean annual direct costs were €8,403 and indirect costs were €34,915. A further two studies using the FFbH confirmed these findings of increased costs with decreasing functional ability. Finally, in two studies assessing the relationship between disease severity and costs, there was a statistically significant difference (p < 0.001) in both direct and indirect costs for each level increase in disease severity (based on ACR functional classes I, II, III and IV) and increases in costs with increasing disease severity categorised as no disability, mild, moderate and severe. CONCLUSION: The economic burden of RA appears highly dependent on both the level of functional disability and disease severity.

**PMS22**

**ECONOMIC IMPACT OF ALLOPURINOL HYPERSENSITIVITY SYNDROME**

D’Souza AO, Fuldeore MJ, Khanna D, Meissner BL

1Xcenda, Palm Harbor; FL, USA, 2TAP Pharmaceutical Products Inc, Lakeforest, IL, USA, 3UCLA, Los Angeles, CA, USA

**OBJECTIVE:** The study is an assessment of the economic impact of allopurinol hypersensitivity syndrome (AHS) in a managed care population. METHODS: Due to absence of a specific ICD-9 CM code for AHS, an algorithm was developed using results of a modified Delphi process to identify an AHS episode, and assess its economic impact from claims data. Allopurinol users were identified as those who had a prescription during January 1, 2000 to June 30, 2006. Presence of an AHS episode was assessed during the continuous eligibility period after the first allopurinol prescription. The start date of an AHS episode was termed as the index AHS date, and overall health care costs were computed during a six month period before and after the index AHS date. Statistical differences in costs per patient per six month period pre- and post- AHS were assessed using paired t-tests; differences in proportion with non-zero costs were assessed using McNemar’s test. All costs are expressed in 2007 US Dollars.

RESULTS: A total of 417 allopurinol users experienced at least one AHS episode during the period following their index allopurinol prescription compared to 124,546 users who did not. The average cost per patient in the six month period following the index AHS date was $8598 higher than the prior 6-month period ($14,338 vs. $5,740, P < 0.001). The cost increase was evident for both medical ($12,032 vs. $4,242, P < 0.001) and pharmacy components ($2,306 vs. $1,498, P < 0.001). The large difference in medical costs was primarily due to large differences in inpatient costs ($7497 vs. $2335, P < 0.001), as a significantly higher proportion had a hospitalization following the AHS episode compared to the pre-index AHS period (40.3% vs. 16.8%, P < 0.001). CONCLUSION: This study found AHS to have a significant economic impact contributing to an almost three fold increase in overall health care costs.

**PMS23**

**MODELLING OF BURDEN OF FEMORAL NECK FRACTURE IN 2007 FROM PURCHASER’S POINT OF VIEW**


1National Health Insurance Fund Administration, Budapest, Hungary, 2University of Pécs, Pécs, Hungary, 3Flor Ferenc County Hospital, Kistarcsa, Hungary, 4Corvinus University of Budapest, Budapest, Hungary

**OBJECTIVE:** The purpose of this study was to calculate the treatment cost of femoral neck fracture and financial burden of the annual fracture cases at 2007 financial level from health insurance point of view. METHODS: The costs of the treatment of femoral neck fractures are modeled according to the actually NHIFA (National Health Insurance Fund Administration) reimbursed types of care including acute inpatient care, chronic inpatient care, outpatient care, pharmaceuticals and medical devices, home care (nursing), cost of traveling or transport, and sick pay. Cases in which patients were healing following primary treatment (without complications) and cases with complications were examined separately. The financial burden was estimated by using data from international literature and Hungarian studies (number of fractures, mortality, ratio of further treatment, etc.) which were extrapolated for the average health insurance treatment cost of one patient. Yearly average in 2007: USD$1 = 183.83 HUF. RESULTS: The cost of patients in active age-groups cured by primary treatment can vary in a range of USD$9093–USD$7549 depending on cost level of individual care and utilization. The cost of patients with complication (primary treatment and complication) in active age-groups can reach USD$9317–USD$16049, depending on cost level of individual care and utilization. According to our model calculations, the cost of primary treatment of femoral neck fractures and essential further treatment represents an annual burden of USD$22,676,518–USD$32,194,335 for the health insurance system. CONCLUSION: In order to reduce the incidence of neck fractures, one should emphasize the importance of current and future interventions, which projects the possibility of reducing the financial burden at societal level. The real decrease of financial burden can be realized by reducing the risk increasing effect of risk factors of the whole primary treatment on further treatments, following the implementation of well-established and uniform professional decisions.