pared to adalimumab and infliximab when using actual drug utilization data from US commercially-insured population.

PMS16

POTENTIAL COST SAVING OF EPOETIN ALFA COMPARED TO AUTOLOGOUS BLOOD DONATION OR TO NO-BLOOD-CONSERVATION-STRATEGY BEFORE ELECTIVE HIP OR KNEE SURGERY DUE TO REDUCTION IN ALLOGENEIC BLOOD TRANSFUSIONS AND ITS SIDE EFFECTS

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OBJECTIVES: Transfusion of allogeneic blood still is common in orthopedic surgery albeit associated with higher morbidity and mortality. This analysis evaluates from the perspective of a German hospital the potential cost savings of Epoetin alfa compared to predonated autologous blood transfusions or to no-blood-conservation-strategy during elective hip and knee replacement surgery by reducing allogeneic blood transfusions and their associated infectious adverse events. **METHODS:** Individual patients (n = 10,000) were created based on data from controlled trials, the German DRG institute (InEK) and various publications and entered into a stochastic model (Monte-Carlo) one of three treatment arms: Epoetin alfa, preoperative autologous donation and no-blood-conservation-strategy. The model is focused on the costs and events of the procedure and follow-up. The model was validated by an independent external consultant. Clinical and economical variables were obtained from clinical trial databases, the German DRG System, patient records and medical publications- in particular cost per transfusion (allogeneic red blood cells: € 320/unit and autologous red blood cells: € 280/unit), pneumonia treatment (€ 5,000), and length of stay (€ 300/day). Probabilistic sensitivity analyses were performed to determine which, if any, factors had an influence on the model's clinical and cost outcomes. **RESULTS:** At acquisition costs of € 375/40,000 IE Epoetin alfa is cost saving compared to autologous blood donation, and at € 185/40,000 IE compared to no-blood-conservation-strategy. The results were most sensitive to the cost of Epoetin alfa, blood units and hospital days. **CONCLUSIONS:** Upcoming shortages and increasing prices of red blood cells will make Epoetin alfa an attractive blood conservation strategy for anemic patients at reasonable costs, due the reduction in allogeneic blood transfusions and their associated infectious adverse events.

PMS17

THE EFFECT OF BIOLOGICAL TREATMENT ON WORK PRODUCTIVITY AND PRODUCTIVITY COSTS OF RHEUMATOID ARTHRITIS PATIENTS

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OBJECTIVES: Biologics represent significant costs of rheumatic diseases treatment. Our study has focused on productivity comparison of rheumatoid arthritis (RA) patients treated with biologics and patients on DMARDs who are indicated to biologic treatment however therapy is unavailable due to economic limitations. **METHODS:** Work Productivity and Activity Impairment Questionnaire (WPAI:RA) was administered to two groups of patients - patients treated with biologics (n=76) with low disease activity and patients just on DMARDs (n=23) with high disease activity (DAS28 score ≥ 5,1). All patients were in productive age. Patients' demographics, clinical and PRO parameters (DAS28, HAQ, time from diagnosis) and working statuses we collected by rheumatologist. Productivity costs were calculated by friction cost approach using friction period of 130 work-days and average monthly gross income as denominator. **RESULTS:** Mean patients' age on biologics and on DMARDs were 41.0 years (21-61) and 45.7 (22 – 61), respectively. Mean time from diagnosis of biologics and DMARDs groups were 13.5 and 11.6 years, respectively. Average HAQ and DAS28 were 0.77 and 2.64, respectively for patients on biologics and 1.14, 5.62, respectively for patients on DMARDs. Patients on biologics were slightly more work-disable (26.3%) compare to 25.0% DMARDs patients. Overall work-impairment (for patients that reported any work-impairment) for patients on biologics and for patients on DMARDs was 28.1% and 49.6%, respectively. Patients on biologics reported less reduction of daily activities (39.8%) in compare to patients on DMARDs (50.5%). Average annual productivity costs per one patient on biologics and for DMARDs patient were € 1802 and € 2769, respectively. **CONCLUSIONS:** Despite of the fact, patients on biologics had longer time from diagnoses, they reported significantly lower work-impairment and reduction of daily activities in compare to DMARDs patients, which reflected about 53.6% higher productivity costs for patients on DMARDs. Biologic treatment preserves productivity and save productivity costs.

PMS18

BURDEN OF RHEUMATOID ARTHRITIS IN THE CZECH REPUBLIC – DIRECT AND PRODUCTIVITY COSTS

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OBJECTIVES: International pharmacoeconomic studies suggest Health Assessment Questionnaire (HAQ) as an important predictor of evaluation both direct and productivity costs. Costs are supposed to increase with increasing HAQ score. Therefore, we calculated direct and productivity costs for five groups of patients according to their HAQ (<0.6, 0.6-1.1, 1.1-1.6, 1.6-2.1, ≥2.1) to confirm this assumption also in the Czech Republic. **METHODS:** This calculation was based on a retrospective cross-sectional study. We included 126 patients with rheumatoid arthritis, aged 18-84 years either at working status, part-time disabled or full-time disabled. For estimation of direct medical costs, we used microcosting method retrospectively reviewing individual patients' medical records. For calculation of productivity costs we excluded patients older than 63 years of age (retirement pensioners). We used friction costs approach (FCA) with defined friction period of 130 workdays, based on patients' absenteeism. Productivity of part-time-disabled and full-time disabled patients were assumed to be deteriorated by 52% and 70%, respectively, based on the Czech law on pension insurance. The height of average monthly income in year 2010, €960.3 was used as denominator. Costs were expressed as mean value per one patient with RA in each of the HAQ-group. **RESULTS:** Average patients' age was 57.3 years; average time from diagnosis was 17.5 years with mean HAQ score 1.4 and mean DAS28 3.62. Mean annual medical direct costs, for each HAQ-group, were €4076.7, €5950.2, €4691.3, €6932.1, and €6727.1, respectively. Mean annual indirect costs associated with productivity loss were €481.5, €1178.6, €1267.7, €1585.6, and €2122.5, respectively. **CONCLUSIONS:** Direct and productivity costs for patients with rheumatoid arthritis are closely related to the height of HAQ score. Total (direct and productivity) annual mean costs were €7135.6. 31.0% of all patients were treated with biological treatment which represented up to 79.4% of the overall direct medical costs.

PMS19

THE ECONOMIC BURDEN OF POST-MENOPAUSAL OSTEOPOROSIS AND RELATED FRACTURES IN GREECE

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OBJECTIVES: To determine the healthcare resource use (HRU) and costs attributable to osteoporosis and osteoporosis-related fractures in post-menopausal women in Greece **METHODS:** A multi-point data collection procedure, based on strictly-structured interviews with 137 geographically distributed physicians, was used to construct and populate the disease management model for women with post-menopausal osteoporosis (PMO) aged >50years. The model was further validated by a group of 12 experts. Secondly, all HRU items in the model were costed in order to provide per-patient costs of treatment. Cost variables included costs of consultations, laboratory tests, osteoporotic medication, dietary supplements, hospitalization due to fractures and rehabilitation, allcalculated from a third-party payer perspective (Euros, 2011) for a 1year timeframe (retrospective). **RESULTS:** The mean annual cost per PMO patient was €1,384.67 (95%CI: 423.27 – 7281.16). When distinguishing between women with established (PMO with a previous fracture) (27.6% of total) and non-established PMO, the mean annual cost per patient was €2027.46 (95%CI: 508.09-7241.90) and €1139.63 (95%CI: 461.86 - 1324.44) respectively. For PMO women with an established osteoporosis for <1year the mean annual cost was significantly higher compared to those with an established osteoporosis for > 1year €2714.98 (95%CI: 820.17 – 7284.42) versus €1805.54 (95%CI: 508.09 – 7241.77). The mean annual cost per patient with a fracture was €4,334.27 (95%CI: 1,452.86 – 10,730.17) for a hip, €2,723.27 (95%CI: 1,470.39 – 7,839.55) for a vertebral and €1,731.35 (95%CI: 1,131.17 - 1,942.48) for a Colles fracture respectively. The sensitivity analysis (±10% change of baseline values) showed that the factors with the greatest impact on total cost were the probability of established osteoporosis, the probability of a fracture in the previous 12 months, cost of parathormone treatment and the cost of patient monitoring. **CONCLUSIONS:** Treatment of osteoporosis is costly. Efforts to control the main osteoporosis cost drivers and hence its economic impact on the health care budgets, are necessary.

PMS20

TREATMENT OF PATIENTS WITH MODERATE AND SEVERE PSORIASIS – COST-OF-ILLNESS IN THE CZECH REPUBLIC

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OBJECTIVES: Psoriasis (prevalence 2-3%) is not directly life-threatening disease. However, patients suffering from psoriasis and psoriatic arthritis (PsA) are experiencing lower quality of life. Treatment of these diseases represents a significant financial burden for the healthcare system. **METHODS:** Study was based on 12-months retrospective electronic questionnaire reported by dermatologist. We used societal perspective using friction cost approach method for productivity costs calculation. Patients' demographics, clinical data (PASI and BSA index), direct costs (inpatient/outpatient care, local/systemic treatment etc.), productivity costs (invalidity, sick leave) and on QoL (EQ-5D, DLQI) were collected. **RESULTS:** A total of 256 patients participated in the study, average patients' age was 46.79 years (9-75 years), average time from diagnosis was 25.52 years with average PASI 13,76, BSA 28,09%, DLQI 11,74 and EQ-5D 0,7633. Occurrence of PsA was 34.4%. Major direct costs driver was phototherapy (47% of direct costs), systematic treatment (17%) and inpatient care (15%). Within the productive-age patients (18-63 years), 8.6% of patients were fully disabled, 7.4% partially disabled, 73% patients were work-active, and 11% were unemployed, retired or students. 17.2% of work-active patients reported incapacity to work with average duration of 33 days in previous 6 months. Mean indirect costs associated with productivity loss were €848.3 per work-active patient per year €1343.0 per work-active patient with PsA. Mean annual costs per patient with moderate to severe psoriasis and/or PsA were calculated to €3736.5 (direct costs 77%, €2888.2). Mean annual costs per patient with PsA were €4328.3 including €2985.3 for direct costs (69%). **CONCLUSIONS:** Direct costs remain major