RA diagnoses were most prevalent in the Marmara region (38%), followed by Aegean (20%), Central Anatolia (21%), and Mediterranean (15%). Nearly 40% of RA patients had at least one cardiovascular, diabetic, respiratory or allergy comorbid condition prior to diagnosis. 5% of patients were hospitalized and 42% had at least one outpatient visit during the pre-index period. Most patients were prescribed non-COX inhibitors (78%) and immunosuppressants (71%), and 11% of patients were prescribed disease-modifying anti-rheumatic drugs (DMARDs). Few patients (1%) had surgery prior to diagnosis. The total annual cost (a2,386) was comprised of mainly pharmacy (a1,747), followed by outpatient (a360), and inpatient costs (a252), and an average copay of 27a. Prior comorbid conditions including diabetes, respiratory disease as well as hospitalization, glucocorticoid and DMARD use significantly contributed to annual health care costs, unlike gender and age. **CONCLUSIONS:** Annual costs of RA patients are significantly lower in Turkey relative to other countries in Europe, yet, pharmaceutical expenditures cover a significant portion of the overall cost. Comparative effectiveness studies are needed to further decrease pharmaceutical expenditures for RA treatment.

PMS22

INDIRECT COSTS ASSOCIATED WITH RHEUMATOID ARTHRITIS IN TURKEY

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OBJECTIVES: To determine indirect costs of rheumatoid arthritis (RA) due to work loss, RA-related consultations, additional investments and caregivers in patients who utilized public health care facility services in Turkey. Association between indirect cost and disease activity scores such as Global Disease Activity (GDA), EuroQoL health status (EQ-5D), visual analog scale (VAS), Health Assessment Questionnaire (HAQ) and the Routine assessment of patient index data (RAPID-3) were also analyzed. **METHODS:** This cross-sectional study was performed in 10 university rheumatology centers. Eligible patients were age ≥18, diagnosed with RA for at least 12 months according to the American College of Rheumatology (ACR) 1987 criteria. We assessed relevant indirect cost variables, activities associated with indirect costs, and actual costs. Multivariate regression determined variables associated with higher indirect costs. Pearson correlation examined the association between indirect costs and disease activity scores. **RESULTS:** A total of 698 patients (82% female; mean age: 51.2 ± 13.17 standard deviation [SD]) were questioned regarding indirect RA costs. 14% were employees, of which 62% had employer permission to miss work (average 27 days annually) due to RA, costing patients an average €480 annually due to workday loss. 5.4% of patients had other RA-related consultations not covered by insurance (acupuncture, homeopathic, other), bringing their average annual burden to €1,600. 6.5% of RA patients incurred additional RA-related costs (e.g. need for new car, apartment, special equipment), spending an additional €1,640 in 1 year. 13.7% of patients required caregivers. The average annual out-of-pocket amount paid to caregivers was €624. Multivariate regression showed that age and gender were not significantly related to indirect costs. Patients needing caregivers reported significantly higher GDA, VAS, HAQ, RAPID-3 and lower EQ-5D scores. **CONCLUSIONS:** Indirect RA-related costs in Turkey are significant. Comparative effectiveness studies on RA treatment should include direct and indirect costs.

PMS23

TOTAL HEALTH CARE COSTS ASSOCIATED WITH ANKYLOSING SPONDYLITIS INCIDENT CASES IN TURKEY

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OBJECTIVES: To estimate risk-adjusted health care costs and identify associated risk factors for ankylosing spondylitis (AS) expenditures in Turkey using real-world data. **METHODS:** This study used research-identified data from a system that processes claims for all Turkish health insurance funds. Incident cases of adult AS patients with two AS visits at least 60 days apart, identified between June 1, 2010 and December 31, 2010, were required to have no AS diagnosis before June 1, 2010, with at least 1 year of continuous enrollment for the baseline and follow-up years. Pharmacy, outpatient and inpatient claims were compiled over the study period for the selected patients. **RESULTS:** Among 603 patients (mean age: 38.74; female: 44%), 58% were age 18-39, 39% were 40-64 years and 3% were age 65 or older. AS diagnosis was most prevalent in the Marmara region (49%), followed by Central Anatolia (22%), Aegean (13%), and Mediterranean (7%). Nearly 25% of AS patients had at least one cardiovascular, diabetic, respiratory, allergy, Crohn's disease and rheumatoid arthritis comorbid condition prior to diagnosis. Most patients were prescribed non-COX inhibitors (67%) and 7% of patients were prescribed disease-modifying anti-rheumatic drugs (DMARDs). The total annual cost ([a]2,254) was comprised of mainly pharmacy ([a]1,738), followed by outpatient ([a]331), and inpatient costs ([a]162), and an average copay of [a]23. Prior comorbid conditions including diabetes, respiratory disease as well as hospitalization, glucocorticoid and DMARD use significantly contributed to annual health care costs, unlike gender and age. **CONCLUSIONS:** Annual costs of AS patients are significantly lower in Turkey relative to other countries in Europe, yet, pharmaceutical expenditures cover a significant portion of the overall cost. Comparative effectiveness studies are needed to further decrease pharmaceutical expenditures for AS treatment.

PMS24

DIRECT AND PRODUCTIVITY COSTS OF RHEUMATOID ARTHRITIS IN THE SLOVAK REPUBLIC – COST-OF-ILLNESS STUDY

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OBJECTIVES: International pharmacoeconomic studies suggest Health Assessment Questionnaire (HAQ) as an important predictor of evaluation both direct and productivity costs of rheumatoid arthritis (RA). Costs are supposed to increase with increasing HAQ value. Therefore, we calculated direct (from health insurances perspective) 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 Slovak Republic. **METHODS:** This calculation was based on a retrospective cross-sectional study. We included 119 patients with rheumatoid arthritis, aged 18-84 years either at working status, part-time disabled or full-time disabled. We used prevalence-based cost-of-illness method type bottom-up, retrospectively reviewing individual patient's medical record. 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 due to RA. Productivity of part-time-disabled and full-time disabled patients were assumed to be deteriorated by 50% and 70%, respectively, based on the Slovak law on pension insurance. The height of average monthly income in year 2010, €769 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 49.5 years; average time from diagnosis was 12.3 years with mean HAQ score 1.4 and mean DAS28 5.0. Mean annual medical direct costs, for each HAQ-group, were €516, €468, €943, €1676, and €1466, respectively. Mean annual indirect costs associated with productivity loss were €224, €1600, €1847, €2109, and €2030, 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 €2576.

PMS25

STRUCTURE OF DIRECT COST OF CARE OF PATIENTS TREATED FOR SEVERE RHEUMATOID ARTHRITIS IN FRANCE

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OBJECTIVES: To examine the resource utilization and direct costs of care associated with use of biologic agents therapy among prevalent rheumatoid arthritis (RA) patients based on retrospective health care claims data. The database (EGB) is a 1/97 representative sample of the national claim database covering the whole French population. **METHODS:** RA patients were identified as adults (age >18) benefiting from full coverage (ALD eligibility criteria) for RA (ICD-10 M05-06) on January 1, 2009 and still alive on December 31st, 2010. Biologics treated patients (BTP) were defined as RA patients with ≥1 claim for biologics in 2010. All health expenses were assessed from the payer's perspective. A log-linear generalised model was used to adjust the costs in comparing BTP versus patients not treated by biologics (BNP). **RESULTS:** A total of 1,234 RA patients were identified of whom 199 (16.0%) were treated with biologics (BTP) including TNF inhibitors in 85% of cases. In comparing patients not treated by biologics (BNP) versus BTP, the proportion of male patients (24.1% versus 24.1% p=0.99) nor the time since registration for RA coverage (8.5 versus 9.0 years p=0.33) were significantly different but BTP patients were significantly younger 55.2 years ± 12.9 versus 64.1 years ± 14.5 (p<0.0001). The unadjusted per capita annual expenses of BTP were three times higher than in BNP (15,581 € versus 4,892 € - p<0.0001). Drug costs were respectively 8,477 € (54.4% of total) versus 1,151€ (23.5% of total) (p <0.0001) and in-patient care 4,878 € (31.3% of total) versus 1,696 € (34.7% of total) (p< 0.0001). After adjustment for age, the mean annual extra cost of patients on biologics was in the range 11,000 € - 12,000 €. **CONCLUSIONS:** When compared to similar data prior to the era of biologics, the structure of medical expenses in RA patients has shifted from in-patient care towards drugs.

PMS26

ASSESSMENT OF THE BURDEN OF RHEUMATOID ARTHRITIS IN FRANCE: ANALYSIS OF A NATIONAL REPRESENTATIVE CLAIM DATABASE

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OBJECTIVES: To examine the resource utilization and direct costs of care of prevalent rheumatoid arthritis (RA) patients using retrospective health care claims data. **METHODS:** The EGB is a national representative 1/97 sample of individuals covered by the French Health Insurance. Individuals presenting with RA (ICD-10 codes: M05-06) can be identified in the database because they benefit from a full coverage. All items of health care utilization and associated costs were assessed from the Health Insurance perspective for 2010. The economic burden of RA was estimated by comparing medical expenses in the RA adult (>18 years) population to a control group matched on sex and age and using non parametric Mann-Whitney tests. **RESULTS:** A total number of 1,296 RA patients were identified, i.e. a crude prevalence rate of 3.47/1000. The mean age was 63.3 years (± 14.8) and the sex ratio H/F was 0.33. A proportion of 39.4% of patients benefitted from additional full coverage for other co-morbibities, severe Hypertension (7.8%), NIDD (6.1%), Ischemic Heart Disease (3%), Depression (1.9%) being the most frequent. Annual medical costs of the RA population were 2 times higher than control (6,607 € versus 3,248 € p<0.0001). The