

PMS40

EFFECT OF PERSISTENCE OF BIOLOGIC THERAPY ON LONG TERM DIRECT HEALTHCARE COSTS OF PSORIATIC ARTHRITIS IN RUSSIAN PLAQUE PSORIASIS PATIENTS

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OBJECTIVES: To investigate the cost per retention year for ustekinumab (UST) relative to infliximab (INF) in first line treatment of psoriatic arthritis (PsA) in Russian plaque psoriasis patients (PSO). **METHODS:** A 10 year Markov model was constructed with UST and INF as first line biologic therapies and a two-step rescue therapy consisting of adalimumab (ADA) as the second line biologic for both treatment arms and non-biologic supportive care of oral methotrexate 15mg/week (BSC) if the patient fails ADA. Transition probabilities were obtained from PSOLAR, an observational longitudinal study studying the safety of biologics in PSO and PsA, by fitting 5-year time-on-treatment data for self-identified PsA patients with confirmed PSO to a Weibull model and extrapolating over 10 years. All patients were assumed to have failed prior non-biologic therapy and retention on therapy was used as the target endpoint. Direct treatment costs were calculated from the perspective of the Russian Ministry of Health, converted to 2014 euros (1 RUB = € 0.0197) and discounted at 5%, as per Russian pharmacoeconomic guidelines. **RESULTS:** Over a 10 year horizon, INF-ADA-BSC was associated with a higher cost and a lower amount of retention years while the UST-ADA-BSC treatment line gives an additional 0.68 biologic retention years per patient and a potential savings of € 29370 per patient with ustekinumab as first-line biologic treatment. However, these results were sensitive to changes in biologic drug prices and by extension, the market share of biosimilars. **CONCLUSIONS:** An increased retention time is usually correlated with higher patient satisfaction levels as well as response and safety. According to our model, initiating biologic therapy with ustekinumab is cost saving compared to the current first choice biologic, infliximab. However, further research has to be initiated to quantify the relationship between increased patient retention and additional gain in treatment response and safety.

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THE IMPACT OF BIOLOGIC THERAPY VERSUS CONVENTIONAL TREATMENT ON THE COSTS OF ANKYLOSING SPONDYLITIS CHRONIC COMPLICATIONS UNDER THE PERSPECTIVE OF BRAZILIAN PRIVATE HEALTH CARE SYSTEM

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OBJECTIVES: Ankylosing spondylitis (AS) is a form of spondyloarthritis with chronic inflammatory involvement of axial skeleton, variable peripheral joints and non-articular structures. The objective of this study was to determine the costs comparing patients under biologic therapy (BT) with those in conventional treatment (CT), under Brazilian private health care system's perspective. **METHODS:** We studied 6.5 million members of a proprietary claim database, from January 2009 to December 2012. Approximately 0.04% (2,626) was patients with ICD-10 AS-related. Most of them were from private health care plans. All medical out-patients and in-patients treatment costs were studied, including drugs and ancillary diagnostic tests. **RESULTS:** The females comprise 52% of this cohort, and 73.8% of them were between 18 and 49 years old. Around 2,626 patients were treated, being 2,492 with CT and 134 with BT, primarily anti-TNF therapy. About 74% treated with CT presented any comorbidity, while 0.75% of those treated with BT. The total costs were USD3,668 for CT and USD4,575 for BT, with mean patient costs of USD1,980 for CT and USD4,575 for BT. The average hospitalizations costs for comorbidities were USD1,106, stressing that many of them were gastrointestinal complications of the disease. The average hospitalization costs under CT was USD7,988, considering under BT was USD1,271. The average days of hospitalization were 4.83 and 3.1 days for CT and BT, respectively. The total costs of hospitalization of CT was USD511,217 being 62% due to materials (e.g., prosthesis) and USD25,428 for BT, being 17% due to materials and 66% due to room rates and equipment rental. **CONCLUSIONS:** In this Brazilian private claim database, BT had lower direct costs for hospitalizations and probability of comorbidities, when compared to CT. Although the mean patient cost with BT is higher than with CT, the lower probability of comorbidities occurrence with BT may justify its choice.

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YEARS OF WORKING LIFE LOST CAUSED BY RHEUMATIC DISEASES IN PORTUGAL

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OBJECTIVES: The aim of this study was to calculate the years of working life lost (YWLL) caused by rheumatic diseases (RD). **METHODS:** We used data from the cross-sectional, population-based EpiReumaPt study (Sep2011-Dec2013). 10,661 inhabitants were randomly surveyed to capture all cases of RD within a representative sample of the Portuguese population. We analyzed participants aged between 50 and 65 years old (yo), near the official retirement age. YWLL were determined for cases with premature retirement caused by RD (self-reported) estimated as the difference between each participant's age and the respective retirement age ("observed stock"), while the potential YWLL (PYWLL: YWLL+"expected stock" of YWLL still to occur if there is no return-to-work) was the difference between official and actual retirement ages. We also calculated the percentage of time in inactivity (inactivity ratio = YWLL/Active age-range [15-65yo]). All results were based on weighted data. **RESULTS:** 3.9% (n=66,953/N=1,706,750) of the Portuguese population (50-64 yo) had premature retirement caused by RD. The mean age of early retirement caused by RD was 54.8 yo, which led to a total stock of 389,939 YWLL (228 per 1000 inhabitants). Women account for 85% of these YWLL. If all

forms of exit from work are included this figure rises to 617,764 YWLL (disability: 121,323; unemployment: 106,502). A total number of 684,960 PYWLL were estimated (401/1000) if early retirement is considered and 1,186,679 PYWLL (695/1000) for all forms of exit from work. The mean YWLL and PYWLL inactivity ratios were 13% and 25%, respectively. **CONCLUSIONS:** We observed a high stock of accumulated YWLL caused by RD in Portugal. Moreover, if nothing is done otherwise the amount of working life still to be lost from the current early retirees due to RD will almost equal those already gone, meaning that health policies should target not only job retention measures but also return-to-work ones.

PMS43

PATIENT CHARACTERISTICS AND DISEASE BURDEN OF OSTEOPOROSIS IN POST MENOPAUSAL WOMEN AT INCREASED RISK OF FRACTURE IN GERMANY

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OBJECTIVES: This study investigated the characteristics of the female osteoporosis population with increased fracture risk as defined by German guidelines and evaluated the imminent (1-year) risk for fracture and the associated burden. **METHODS:** This observational study used retrospective German sick fund data (~5% of the population). The sample was defined based on 2010 data while the study investigational year was 2011. Women with osteoporosis (WO) were considered to be at increased risk (IR) of fracture if they had at least one prescription for antiresorptive/anabolic drug, a history of osteoporotic fracture, or were identified with a condition or medication outlined in the German guideline. WO not meeting any of these criteria were considered "non-IR". Descriptive analyses on osteoporosis related hospitalization, fracture frequency and osteoporosis related costs were performed. **RESULTS:** Among 74,974 WO, 39,969 (53.3%) were identified as being at IR. The mean age (SD) in the IR and non-IR group was 75.2 (9.5) and 74.0 (10.1) years, respectively. Approximately half of the IR patients received osteoporosis medication (43% bisphosphonate, 2.7% strontium, 0.9% denosumab, 1.5% raloxifen, 0.3% teriparatide). Estimated osteoporotic fracture occurrence was substantially higher in IR than in non-IR (9,647 vs 122 fracture events). IR patients were hospitalized at a higher rate compared to non-IR patients (14.8% vs 6.5%). Mean (SD) and median (IQR) annual osteoporosis-related costs (medication, hospitalization, outpatient treatment) were 1,405€ (3,193€) and 435€ (622€), respectively, for IR patients and 640€ (2,110€) and 225€ (237€) for non-IR patients. **CONCLUSIONS:** Approximately half of the osteoporosis population met increased risk definition criteria. A noteworthy proportion of these patients are at imminent risk for fracture based on the observed fracture events over a 12 months' follow up. Despite being responsible for a disproportionately large disease burden and related health care costs less than half of the IR patients received medication for their osteoporosis.

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COST OF EARLY RETIREMENT CAUSED BY RHEUMATIC DISEASES IN PORTUGAL

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OBJECTIVES: We aim to estimate indirect costs of early retirement caused by RD in Portugal. **METHODS:** We used individual level data from the national, cross-sectional, population-based EpiReumaPt study (Sep2011-Dec2013). 10,661 inhabitants were randomly surveyed in order to capture and characterize all cases of RD within a representative sample of the Portuguese population. In this analysis we used all participants aged between 50 and 65 years old (yo), near the official retirement age. An official national database was used to calculate productivity values by gender, age and region, using the human capital approach. All results were based on weighted data. **RESULTS:** 29.9% of the Portuguese population with ages between 50 and 64 yo were officially retired. Among these, 13.1% were retired due to RD. The estimated annual indirect cost following premature retirement caused by RD was €910 million (€555 per capita; €1,625 per self-reported RD patient and €13,592 per early retiree due to RD). Females contributed with 84% for these costs (€766 million; €882 per capita versus €187 from males). The mean retirement age for early retirees due to RD was 54.8 yo. Thus, we estimate an average indirect cost of €138,635 per early retiree due to RD until official retirement age (assuming 65 yo and fixed annual productivity values). Moreover, RD may underlie early retirement even when RD is not self-reported to be its cause, since we also found an independent association between all registered early retirement and self-reported RD (adjusted OR: 1.41; CI: 1.03-1.95; p=0.031), meaning that RD might further contribute for this sort of indirect costs. **CONCLUSIONS:** Early retirement caused by RD amounts to approximately 0.5% of the national GDP 2013. The public health concern and the economic impact highlight the need to prioritize investments in health and social protection policies targeting patients with rheumatic conditions.

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HEALTH CARE RESOURCE UTILIZATION AND DIRECT MEDICAL COST FOR PATIENTS WITH OSTEOPOROTIC FRACTURES IN TIANJIN, CHINA

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OBJECTIVES: To estimate annual health care resource utilization and direct medical cost for patients with osteoporotic fractures in Tianjin, China. **METHODS:** Data were obtained from Tianjin Urban Employee Basic Medical Insurance database. Patients who ≥50 years old, with ≥1 diagnosed of osteoporotic fractures between 2009 and 2010, and 12-month continuous enrollment before (baseline) and after (follow-up) the first observed osteoporotic fracture diagnosis were identified. Both osteoporosis-related and all-cause health care resource utilization and direct medical cost were estimated during the 12-month follow-up period. Ordinary least square regression model was applied to identify factors associated with the direct medical cost. **RESULTS:** A total of 5941 patients were included, with