tively, QALYs were significantly lower for the most sedentary (Q1) group relative to the least sedentary groups (Q4 and Q3) adjusted for age, gender, and BMI. Furthermore, for average overweight women age 65, even a greater additional hour spent in sedentary behavior was associated with greater decreases in median QALYs for those who were more sedentary than those who were less sedentary (Q1: -0.049, Q2: -0.036, Q3: -0.025, Q4: -0.01, 95% CI: -0.060 to 0.030). CONCLUSIONS: Persons in the most sedentary group suffered the greatest QALY losses. Study results support intervention targeting the most sedentary persons in reducing this behavior.

MUSCULAR-SKELETAL DISORDERS – Cost Studies

**PMS25**

**VALIDATION OF A BUDGET IMPACT MODEL FOR USE OF DENOSUMAB IN POST-MENOPAUSAL WOMEN WITH OSTEOPOROSIS**

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OBJECTIVES: To assess the validity of a previously published, updated denosumab budget impact model (BIM), evaluating the budgetary impact to a hypothetical US health plan of increased utilization of denosumab in postmenopausal women with osteoporosis at high risk of fracture. METHODS: The BIM was evaluated using face validity, internal validity and cross validity tests. Face validity of the model was assessed by comparing the underlying Markov model with prior published osteoporosis treatment models, and sensitivity analyses by simultaneously varying the market share, price of denosumab, and direct medical costs of fractures. Cross validity tests were conducted on the following input parameters: population parameters, treatment persistence rates and direct medical costs of fractures. RESULTS: In a base case analysis, increasing utilization of denosumab up to 19.6% of eligible patients in year 3 compared with a projected demand validated by expert physician. RESULTS: As the use of tofacitinib was increased from 0.9% (current scenario) to 15.3% (projected for three years) total expected PMPM increased in USD $345,510 equivalents to total expenditure of this pathology in Colombia. CONCLUSIONS: The use of tofacitinib in patients who have an inadequate response to methotrexate, decreases total costs of care for the health system in Colombia.

**PMS26**

**BUDGET IMPACT ANALYSIS OF BOTULINUM TOXIN TYPE A TREATMENT FOR UPPER LIMB SPASTICITY IN HONG KONG**

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OBJECTIVES: Upper limb spasticity (ULS) secondary to stroke has a considerable impact on patients’ quality of life and patients, particularly those with pain, activity and mobility. Botulinum neurotoxin-A (BoNT-A) injections are effective in treating ULS. We aimed to calculate annual cost per-patient basis and the expected overall annual budget impact in Hong Kong using static and dynamic market share sensitivity analyses by simultaneously varying the market share, price of denosumab and direct medical costs of fractures. METHODS: A budget impact model for ULS patients was developed. Two market-share scenarios were modelled over 5 years. While the static scenario assumed current market shares (abobotulinumtoxinA: 76%; onabotulinumtoxinA: 24%) to remain constant over time, the dynamic scenario assumed market share of abobotulinumtoxinA to rise up to 65% across 5 years. Epidemiologic data inputs were sourced from the most recently published literature, unit costs for BoNT-A, healthcare resources use from physicians working in Hong Kong, and market share assumptions from IMS Health (Market Sizing). Equivalence of the 2 BoNTAs in terms of efficacy and safety is assumed but the units of abobotulinumtoxinA are specific to the preparation and (2) they were biologic-naïve before index. Healthcare costs were assessed from the Russian Federation and the official database of purchase and sale prices. Stakeholders included the Ministry of Health of the Russian Federation for calculation of medical care costs. CONCLUSIONS: The use of tofacitinib in patients who have an inadequate response to methotrexate, decreases total costs of care for the health system in Colombia.

**PMS27**

**BUDGET IMPACT ANALYSIS OF THE INCLUSION OF TOFACTINIB IN THE PUBLIC LIST OF REIMBURSEMENT IN THE TREATMENT OF INFLAMMATORY ARTHRITIS AFTER INADEQUATE RESPONSE TO METHOTREXATE IN COLOMBIA**


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OBJECTIVES: Tofacitinib is an oral small molecule Janus kinase inhibitor for the treatment of moderate to severe rheumatoid arthritis (RA) in adults who have an inadequate response to methotrexate. The aim of this work is to estimate the budget impact of the inclusion of tofacitinib in the public list of reimbursement in Colombia. METHODS: A model was built with a time horizon of three years. The comparators were: abatacept, adalimumab, certolizumab, etanercept, infliximab, golimumab, rituximab, tocolizumab, and tocilizumab. The perspective was healthcare providers, including only direct costs: drug costs and administration costs. All currency units were in USD ($ 1 USD = COP 1,971). A 5% discount rate was used. The number of expected cases was calculated from the budget impact of the inclusion of tofacitinib in the Colombian health system (BCUA). Additionally a prevalence of 0.52% was used and we assumed that 30% of patients were refractory to initial treatment with non-biologic DMARDs. The costs of drugs were used current price regulation and the official database of purchase and sale of drugs (SIS). The market share model was based on IMS data and the projected demand validated by expert physician. RESULTS: As the use of tofacitinib was increased from 0.9% (current scenario) to 15.3% (projected for three years) total expected PMPM increased in USD $345,510 equivalents to total expenditure of this pathology in Colombia. CONCLUSIONS: The use of tofacitinib in patients who have an inadequate response to methotrexate, decreases total costs of care for the health system in Colombia.

**PMS28**

**BUDGET IMPACT ANALYSIS OF BOTULINUM TOXIN TYPE A IN A TREATMENT OF POST-STROKE SPASTICITY IN THE RUSSIAN FEDERATION**

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OBJECTIVES: To conduct budget impact analysis of abobotulinumtoxinA, onabotulinumtoxinA, and clostridium botulinum toxin type A (IncobotulinumtoxinA). The total number of patients in Russian Federation was 287,334. According to the performed modeling using up-to-date epidemiological data only 212,126 people survive by the 1st year of the study. The BIM model used in this application is based on Russian Federation budget impact model (BIM), evaluating the budgetary impact to a hypothetical US health plan of increased denosumab utilization in postmenopausal osteoporosis.

**PMS29**

**RECENT COST TRENDS AMONG PATIENTS USING BIOLOGIC AGENTS FOR THE TREATMENT OF PSORIATIC ARTHRITIS**

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OBJECTIVES: A number of therapeutic classes are available to treat psoriatic arthritis (PsA), including biologic drugs. Although the wholesale acquisition cost of biologic drugs has increased in recent years, there is little published evidence documenting cost trends from the US perspective. The objective of this study was to assess cost trends for patients using biologic therapy for PsA from the US perspective. METHODS: Continuously enrolled adult patients with ≥2 outpatient diagnoses of PsA were selected from the MarketScan databases if their first biologic prescription date (index date) occurred between July 1, 2008, and July 31, 2013. Patients were included in the study if (1) full access was available to all medical and pharmacy claims for ≥6 months before and ≥12 months after their index date, and (2) they were biologic-naïve before index. Healthcare costs were assessed from the payer perspective and based on annual reimbursed amounts. Results were stratified by all-cause vs. PsA-related costs and within these 2 categories further subdivided into medical inpatient, medical outpatient, emergency room, and pharmacy costs. RESULTS: In total, 25,565 patients met the inclusion criteria. All-cause healthcare costs in the 6 annual cohorts increased by 11.1% between 2008 and 2013, with an average annual increase of 10.6% (or $2,862). PsA-related annual costs were estimated to increase by 63.6%, with an average annual increase of 12.7% (or $2,335). Although cost increases in all categories of interest were observed over time, the driver of the cost trends was the PsA-related pharmacy costs, predominantly the cost of biologic therapy, with an estimated increase of 65.6% and an average annual increase of 13.1% (or $2,220). CONCLUSIONS: For US managed care organizations, healthcare costs among patients initiated on biologic therapy for PsA has increased by 53.1%, which is mostly driven by the 65.6% change in PsA-related pharmacy costs.

**PMS30**

**MODELING OF SOCIETAL COSTS UNDER DIFFERENT TREATMENT SCHEMES OF POST-STROKE SPASTICITY IN THE RUSSIAN FEDERATION**

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OBJECTIVES: To assess the validity of a previously published, updated denosumab budget impact model (BIM), evaluating the budgetary impact to a hypothetical US health plan of increased utilization of denosumab in postmenopausal women with osteoporosis at high risk of fracture. METHODS: The BIM was evaluated using face validity, internal validity and cross validity tests. Face validity of the model was assessed by comparing the underlying Markov model with prior published osteoporosis treatment models, and sensitivity analyses by simultaneously varying the market share, price of denosumab, and direct medical costs of fractures. Cross validity tests were conducted on the following input parameters: population parameters, treatment persistence rates and direct medical costs of fractures. RESULTS: In a base case analysis, increasing utilization of denosumab up to 19.6% of eligible patients in year 3 compared with a