sleep questionnaire or on the derived MOS sleep scales. Significant improvement in the abatacept group compared to control on sleep adequacy, sleep disturbance, somnolence, and both sleep problem indices I and II were found. For both studies, sleep quantity was not significantly different between treatment groups, but optimal sleep significantly improved in the abatacept vs control group: ATTAIN (18% vs. 12%, *p* < 0.0001) and AIM (16% vs 5%, *p* = 0.0214). CONCLUSION: Treatment with abatacept improves several different aspects of sleep in RA patients. In particular, sleep disturbance and sleep problems given by index II are reduced, and optimal sleep is improved.

**PMS37**

**ASSESSING THE VALIDITY AND RELIABILITY OF A SIMPLE ACTIVITY PARTICIPATION MEASURE FOR RHEUMATOID ARTHRITIS CLINICAL TRIALS**

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**OBJECTIVE:** To examine the validity, reliability, and sensitivity to change of a simple measure of activity participation for rheumatoid arthritis (RA) clinical trials. Joint damage from RA significantly limit patients' participation of daily work and non-work activities, however, few instruments were available to measure treatment effect on this aspect. **METHODS:** We measured activity participation in two randomized clinical trials of abatacept in active RA patients. Activity participation was assessed by two items: 1) the number of days in the past month a patient was unable to perform usual activities (paid or unpaid work, or any other daily activities), and 2) how often a patient was unable to perform usual activities (paid or unpaid work, or any other daily activities). The simple activity completion score. Moderate to strong correlations established for the WLQ and WOMAC. PRODUCIVITY gains were translated to annual US dollars inflated to 2007. **RESULTS:** Baseline characteristics of tramadol ER and placebo groups were comparable. After 12 weeks of treatment, the tramadol ER treated patients significantly improved than placebo (WOMAC score of 23 vs. 16 points, *p* = 0.002). 23 points improvement in WOMAC when imputed to WLQ translated into improvement of WLQ time management (8.15%), physical demands (11.78%), mental-interpersonal (5.99%), overall output demands (6.95%) and improvement in work productivity (1.96%). The improvement observed in the tramadol ER groups when aggregated to annual dollars per employee in 2007 ranged from $1201–$7218, was numerically higher than placebo treated patients [$882–$5098]. Sensitivity analyses using other health-measures resulted in similar findings. **CONCLUSION:** Treatment with tramadol ER resulted in significant improvement in pain and physical function, when imputed to WLQ corresponds to productivity improvement.

**PMS38**

**ESTIMATING WORK PRODUCTIVITY: EFFECTS OF TRAMADOL EXTENDED-RELEASE TREATMENT**

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**OBJECTIVE:** To estimate work productivity for patients treated with tramadol extended-release (ER) or placebo. **METHODS:** Intent-to-treat patients (18–65 years old) with chronic osteoarthritis pain from a 12-week, randomized, double-blind, placebo-controlled, fixed-dose study and treated with tramadol ER (100–400 mg) or placebo were compared. Work productivity was not assessed within the study, it was estimated using an imputation methodology. This imputation method cross-walks other health measures into Work Limitations Questionnaire (WLQ) scores. The WLQ is a validated questionnaire assessing health-related decrements in job performance and work productivity (“presenteeism”). According to this method, mean change in the Western Ontario and McMaster Universities (WOMAC) Osteoarthritis total index scores were multiplied by the regression coefficients established for the WLQ and WOMAC. Productivity gains were translated to annual US dollars inflated to 2007. **RESULTS:** Baseline characteristics of tramadol ER and placebo groups were comparable. After 12 weeks of treatment, the tramadol ER treated patients significantly improved than placebo (WOMAC score of 23 vs. 16 points, *p* = 0.002). This 23 points improvement in WOMAC when imputed to WLQ translated into improvement of WLQ time management (8.15%), physical demands (11.78%), mental-interpersonal (5.99%), overall output demands (6.95%) and improvement in work productivity (1.96%). The improvement observed in the tramadol ER groups when aggregated to annual dollars per employee in 2007 ranged from $1201–$7218, was numerically higher than placebo treated patients [$882–$5098]. Sensitivity analyses using other health-measures resulted in similar findings. **CONCLUSION:** Treatment with tramadol ER resulted in significant improvement in pain and physical function, when imputed to WLQ corresponds to productivity improvement.
demonstrated that IFX-treated patients could gain economic benefit by retaining employability over time.

MUSCULAR-SKELETAL DISORDERS—Health Care Use & Policy Studies

PMS40

ORAL VS INJECTABLE TREATMENTS: PATIENT PREFERENCE IN BRAZILIAN PATIENTS

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OBJECTIVE: To assess the preference of Brazilians for drugs with different dosing and methods of application to treat chronic diseases, such as osteoporosis. The assessed product types were: once-monthly oral, injection once every three months, and once-yearly injection.

METHODS: Quantitative study performed through personal and individual interviews. A representative sample of the study population (N = 392 subjects) was used. Subjects over 45 years old were interviewed. A 14-item structured questionnaire was used. A card with the drug characteristics (dosing, cares of administration, side effects and annual treatment cost) was shown to the interviewed subjects.

RESULTS: Forty-four percent of the interviewed subjects were male and 56% were female. Sixty percent of the interviewed subjects were between 45 and 59 years old, and the other 40% were 60 years old or more. Fourteen percent of the interviewed subjects belonged to the Brazilian socioeconomic classification “A”, followed by 39% in the classification “B”, and 47% in the classification “C”. Twenty-eight percent had higher education, followed by 29% with secondary education, and 42% with primary education. Ninety-three percent of the interviewed subjects do not usually take injection drugs. For treatment of chronic diseases, 72% of the patients prefer oral drugs, 16% prefer injection drugs diluted in serum, 9% prefer injection drugs, and 3% did not inform their preference. These percentages remained the same when dosing, side effects and prices were discussed. 83% of the patients who chose oral drug did it so by convenience of the dosing, 21% of them also think that oral drugs have fewer side effects than injection drugs. Generically comparing (not considering the card with product profiles) oral and injection drugs, 78% of the population prefer oral treatments.

CONCLUSION: If patients are given the chance to choose between oral or injection drugs to treat chronic diseases, 78% prefer oral drugs instead of injection ones.

PMS41

UTILIZATION AND COSTS OF DRUGS AND OFFICE SERVICES AMONG RECIPIENTS OF MEDICAID WITH RHEUMATOID ARTHRITIS WITH VERSUS WITHOUT COMORBID DEPRESSION

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OBJECTIVE: To determine the differences in the patterns and costs of health care utilization between recipients with Rheumatoid Arthritis (RA) with versus without comorbid depression enrolled in a state Medicaid program.

METHODS: A retrospective cross-sectional analysis of a de-identified state Medicaid fee-for-service administrative claims dataset was conducted. The target population included recipients between 15–64 years old who were continuously eligible for benefits between January 1, 2002 and December 31, 2003. Recipients with at least one medical services claim with a primary diagnosis of RA in 2002 were selected. The sample was then dichotomized between those with versus without a medical claim with a primary diagnosis of depression during 2002. Data from calendar year 2003 was used to compare the patterns of RA-related office services and prescription medication utilization and related costs between the two groups.

RESULTS: There were 763 recipients identified with RA, of whom 244 (31.9%) had comorbid depression. A significantly (p < 0.05) higher proportion of recipients 21–44 years of age (41.9%), females (34.4%), and whites (32.0%) with RA had comorbid depression. Negative binomial regression controlling for demographic variables and comorbidities showed the frequency of office visit utilization was significantly (p < 0.05) lower for recipients with comorbid depression than those without depression. A significantly (p < 0.05) higher proportion of recipients without depression than with depression had a claim for a DMARD (49.4% versus 31.9%) and a biologic agent (17.0% versus 10.0%). The average annual amount paid by Medicaid per recipient for the use of office services and prescription medications was significantly (p < 0.05) higher for recipients without depression ($2914) than with depression ($2049).

CONCLUSION: Roughly one-third of the recipients with RA had comorbid depression. The use of primary care office services and prescription medications that can slow the progression of RA was lower among recipients with depression than without depression.