WTP threshold, certolizumab may be the most cost-effective agent for the treatment of rheumatoid arthritis compared to all other TNF-alpha inhibitors.

PMS29

CANADIAN COST-EFFECTIVENESS ANALYSIS OF ABATACEPT (ORENCIA™) FOR THE MANAGEMENT OF MODERATELY TO SEVERELY ACTIVE RHEUMATOID ARTHRITIS IN PATIENTS WITH INADEQUATE RESPONSE TO METHOTREXATE

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BACKGROUND: Biological therapies including infliximab, etanercept, adalimumab and abatacept are options for rheumatoid arthritis (RA) patients who had an inadequate response to Disease-Modifying Anti-Rheumatic Drugs (DMARDs), such as methotrexate (MTX). **OBJECTIVES:** To determine the cost-effectiveness of abatacept compared to other biologics in the treatment of moderate-to-severe active RA in patients with inadequate response to MTX in Canada. **METHODS:** An existing US-based cost-effectiveness model was adapted to the Canadian setting. The techniques of dynamic simulation were employed to estimate the impact of abatacept and other biologics on functional disability (expressed in patients' Health Assessment Questionnaire (HAQ) scores) and clinical and economic outcomes. The model focuses on a hypothetical cohort of patients, simulating their disability quarterly over 1, 5, 10 years and lifetime. First-order simulation was conducted to gauge the influence of individual input parameters. Second-order Monte Carlo simulation was performed to examine the overall effect of uncertainty in the model. Efficacy data were based on a separate meta-analysis. The perspective adopted was that of a provincial ministry of health. Utility data were obtained from a study that mapped Health Utility Index values on a Canadian RA population. Costs (2009 CAD) and outcomes were discounted at 5% annually. **RESULTS:** Abatacept has a cost-effectiveness ratio of approximately $93,000 per QALY gained vs. MTX, comparable with those of etanercept ($96,000) and adalimumab ($112,000) and much lower than that of infliximab ($171,000). At willingness-to-pay between $80,000 and $97,000, abatacept is the most cost-effective option. Results were most sensitive to the assumption of the threshold for clinically meaningful HAQ improvement at 6-month and applied time horizon. **CONCLUSIONS:** Determination of an appropriate biological therapy in RA depends on multiple factors including economic value. Abatacept offers a valuable therapeutic option for the treatment of moderate-to-severe active RA in patients with inadequate response to one or more DMARD therapies.

PMS30

ADHERENCE TO DULOXETINE AND HOSPITAL UTILIZATION IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER AND CHRONIC PAIN

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OBJECTIVES: Duloxetine, a serotonin and norepinephrine reuptake inhibitor, has been approved for the treatment of both major depressive disorder (MDD) and certain chronic pain-related diseases (CPD). This study examined the association between adherence to duloxetine and hospital utilization among MDD patients with CPD. METHODS: This is a retrospective cohort study analyzing data from the MarketScan commercial databases. Patients were included in the analyses if they used duloxetine during the index period of July 1, 2006-June 30, 2007 and had no record of duloxetine use during a 3-month washout period. Inclusion criteria required MDD diagnosis and at least one CPD of interest (fibromyalgia, diabetes with neurological manifestations, low back pain, headache, and osteoarthritis). Patients were followed up 12 months after index date. Adherence was defined as medication possession ratio (MPR) of 80% or higher. Hospital utilization included emergency room visits and hospitalizations. Psychiatric hospitalizations were based on principal diagnosis codes for admissions. Logistic regression and negative binomial regression models were used to adjust for patient characteristics. RESULTS: Compared to those with MPR < 80% (n = 2,988), patients adherent to duloxetine (n = 2,589) had fewer emergency room visits (1.51 vs. 2.07; $p < 0.0001$), lower likelihood of emergency room visit (36.85% vs. 41.57%; $p = 0.0003$), fewer all-cause hospitalizations (0.34 vs. 0.46; $p < 0.0001$), fewer psychiatric hospitalizations (0.10 vs. 0.15; $p < 0.0001$), fewer all-cause hospitalization days (1.46 vs. 2.43; $p < 0.0001$), fewer psychiatric hospitalization days (0.53 vs. 1.04; $p = 0.0001$), lower likelihood of hospitalization for any cause (20.97% vs. 25.07%; $p = 0.0003$) and lower likelihood of psychiatric hospitalization (6.80% vs. 8.97%; $p = 0.0028$). These differences were essentially the same after adjusting for patient characteristics. CONCLUSIONS: Adherence to duloxetine was associated with lower hospital utilization among MDD patients with CPD, suggesting the importance of improving patient adherence to duloxetine. Future studies should examine whether the lower hospital utilization associated with duloxetine adherence translates to lower costs.

MUSCULAR-SKELETAL DISORDERS – Patient-Reported Outcomes Studies

PMS31

AN EVENT-LEVEL ANALYSIS OF PRESCRIPTION REFILL INTERVALS FOR ADALIMUMAB AND ETANERCEPT IN THE TREATMENT OF RHEUMATOID ARTHRITIS

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OBJECTIVES: To assess differences in rates of shorter, longer, and on-time prescription refill intervals for adalimumab and etanercept in rheumatoid arthritis (RA) and to identify factors associated with rates of longer prescription refill intervals. **METHODS:** An event-level analysis was conducted using medical/pharmacy claims from a database of 98 managed care plans. Inclusion criteria included index tumor necrosis factor inhibitor (anti-TNF) started January 2004-December 2007, patient age ≥18, 2 RA diagnosis codes (ICD-9 code 714.xx), and 365 days of index anti-TNF treatment. Patients with selected other inflammatory conditions or evidence of anti-TNFs during 6 months prior to index date or abatacept or rituximab while on index anti-TNF were excluded. Prescription refill intervals were assessed by comparing the observed time between dates of prescription claims with recommended dosing frequency in prescribing information (i.e., adalimumab = 14 days, etanercept = 7 days). Observed refills within seven days of the recommended dosing frequency were considered "on time"; intervals greater than seven days "longer"; and less than seven days "shorter". Multivariable logistic regression analyses were performed to examine determinants of longer refill intervals. **RESULTS:** There were 26,103 prescription refill events for adalimumab (N = 1,279 patients), and 48,859 for etanercept (N = 2,277 patients). Rates of shorter refill intervals were low: 3.7% for adalimumab and 3.5% for etanercept. Longer and on-time refill interval rates were comparable for adalimumab (27.4% and 68.9%) and etanercept (29.5% and 67.0%), respectively. Regression analyses revealed etanercept longer intervals increased with duration of use ($p < 0.01$), female gender ($p < 0.01$), and lack of insurance ($p < 0.01$), but decreased with older age ($p < 0.01$). A similar pattern emerged for adalimumab. **CONCLUSIONS:** More than one in four of all adalimumab and etanercept prescription refill events in RA had longer refill intervals than recommended. Further research is warranted assessing the clinical and economic consequences of delays in prescription refills, which may be suggestive of under-dosing.

PMS32

ANTI-TUMOR NECROSIS FACTOR SWITCHING, DISCONTINUATION, AND PERSISTENCE IN MANAGED CARE PATIENTS WITH RHEUMATOID ARTHRITIS

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OBJECTIVES: To evaluate switching, discontinuation, and persistence among patients with RA receiving anti-TNFs. **METHODS:** This was a retrospective cohort study of RA patients, in a large managed care database, using their first anti-TNF January 1, 2005 -June 30, 2006. Patients were required to have ≥30 months of continuous plan eligibility: 6 months prior to and 24 months following their index anti-TNF date, and no evidence of pre-index biologic use. For patients with index adalimumab (ADA) or etanercept (ETA), a gap in days' supply exceeding 60 days (i.e., no fills between prescription fill dates and prescription fill date + days supply + 60) indicated discontinuation. For patients with index infliximab (IFX), a gap in medical claims for infusions >8 weeks + 60 days indicated discontinuation. Switching was defined as use of a new biologic post-index. Persistence was defined as continuous use of index anti-TNF without discontinuation or switching. Differences in switching, discontinuation, and persistence rates were evaluated.**RESULTS:** A total of 1780 patients were analyzed: ADA = 601 (33.8%); ETA = 785 (44.1%); IFX = 394 (22.1%). Over three-quarters (77%) were female; mean age was 50.1 years. IFX patients were older and had a higher Charlson-Quan comorbidity score than ADA or ETA patients. Each treatment group experienced switching (ADA = 13.1%, ETA = 11%, IFX = 13.5%). The IFX group had the lowest rate of discontinuation (37.6%) and greatest persistence (49%) compared to ADA (57.2% discontinuation, 29.6% persistence; $p < 0.0001$ for both) or ETA (57.5% discontinuation, 31.6% persistence; $p < 0.0001$ for both). **CONCLUSIONS:** These results indicate that among RA patients receiving anti-TNFs, the portion that switch does not vary by treatment in the 2 years following start of therapy. However, differences in discontinuation and persistence were noted. Studies are needed to investigate reasons for and impact of discontinuation and persistence on clinical and economic outcomes.

PMS33

PARTICIPATION, SATISFACTION AND KNOWLEDGE LEVEL AMONG PSORIATIC ARTHRITIS AND CUTANEOUS PSORIASIS PATIENTS

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OBJECTIVES: To examine attitudes and satisfaction with decision-making among psoriatic arthritis (PA) patients, comparing them with cutaneous psoriasis (CP) patients. A further aim was to analyse factors associated with patients preferring an active participation and patient satisfaction. **METHODS:** A questionnaire was self-completed after a routine medical visit by a consecutive sample of 231 psoriasis patients, including 33 PA patients. The questionnaire was based on previously pub-