ECONOMIC EVALUATION OF TUMOR NECROSIS FACTOR INHIBITORS IN THE TREATMENT OF ANKYLOSING SPONDYLITIS

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OBJECTIVES: Ankylosing spondylitis (AS) is a chronic, progressive inflammatory form of arthritis with annual estimated costs of US $6720 per patient. Given the chronic nature of AS and the high costs of the newer treatments such as tumor necrosis factor (TNF) inhibitors, the goal of this study is to conduct an incremental cost-effectiveness analysis of TNF inhibitors compared with a standard treatment option in patients with AS.

METHODS: A Markov simulation model (one-year) was used to evaluate the incremental cost-effectiveness of three treatments in patients with AS: 1) etanercept; 2) infliximab; and 3) standard treatment (NSAIDs). The decision model assumed a base-case population of 40 year-old men and the efficacy and withdrawal data were based on clinical trials of respective drugs. The effectiveness measure was Assessments in Ankylosing Spondylitis 20% Response data (ASAS 20) and the incremental cost-effectiveness ratio (ICER) was calculated as additional cost per ASAS 20% Response.

The ICER of etanercept compared with a standard treatment was $12,000 and $13,000, respectively. The ICER of infliximab compared with standard treatment was $26,314.59/ASAS 20. One-way sensitivity analyses were conducted to test the robustness of study results. RESULTS: The annual costs for standard treatment, etanercept, and infliximab were $3000, $12,000 and $13,000, respectively. The ICER of etanercept compared with standard treatment was $10,860.96/ASAS 20, while the ICER of infliximab compared with standard treatment was $26,314.59/ASAS 20. One-way sensitivity analyses indicated that the conclusions were relatively stable to variations in model assumptions.

CONCLUSION: The introduction of TNF inhibitors has represented a significant advance in the available treatments for patients with AS. Thus, demonstrating the cost-effectiveness of these new treatments can be a critical factor in determining the acceptability of these new therapies especially since these agents may offer improved function and significant downstream economic savings.

A COMPARISON OF HEALTH CARE COSTS IN PATIENTS WITH PSORIATIC ARTHRITIS (PsA) WHO RECEIVED ETANERCEPT (ETA), ETA PLUS METHOTREXATE (MTX), INFLIXIMAB (INF), OR INF PLUS MTX

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OBJECTIVES: To evaluate the all-cause health care costs among patients with PsA, who received anti-TNF treatment.

METHODS: A retrospective study using the PharMetrics database, compiled from managed care plans throughout the United States from January 2000 through June 2005, was conducted. Patients continuously enrolled for 6 months pre- and 12 months post-diagnosis, and having 2 distinct claims of PsA, were included in the study. A 6-month period prior to the index diagnosis date was used to establish anti-TNF and/or MTX treatment, naïve patients, and to identify new PsA patients. Per patient per month treatment (PPPM) costs was calculated for patients during their treatment period. The cost of adverse events could not be identified separately in this analysis. A multivariate model was used to adjust for covariates including age, gender, number of medical visits, Charlson Co-morbidity Index, and pre-period health care costs.

RESULTS: A total of 357 patients with PsA were included in the analysis. Nearly half of the patients...
were females. The mean age and Charlson Co-morbidity Index score were higher among patients who received INF compared to those on ETA. All-cause PPPM costs were higher among patients who received ETA ($6320) compared to patients who received INF ($2313). The magnitude of the difference was greater among patients who received INF alone ($3368) compared to ETA alone ($8257, p < 0.05). Differences in total health care costs persisted after adjustment for covariates (p = 0.0366). Similar results were obtained when excluding outlier patients with high cost (outliers were defined as those patients with values more than 2 standard deviations above the mean). CONCLUSION: This study indicates that INF therapy is associated with lower all cause health care costs compared to ETA therapy, in the treatment of patients with PsA. The choice of a biologic treatment on health care costs should be considered when evaluating treatment strategies.

PAR7
EVALUATION OF PHARMACOLOGIC TREATMENTS OVER 30 MONTHS FOR OSTEOARTHRITIS USING A NATIONAL MANAGED CARE DATABASE
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OBJECTIVES: To evaluate trends in utilization and cost of pharmacologic treatments of osteoarthritis (OA). METHODS: A retrospective analysis of OA patients (>18 years of age) in the PHARMetrics database during 2001 and 2002 was conducted using an observation period (January 2003–June 2005) divided into ten quarters. Patients were retained if they had continuous eligibility, at least two OA diagnoses, OA drug use during the observation period, no cancer, HIV or organ transplant, and were not in a nursing home. The percentage of days of drug availability, proportion of patients and cost were evaluated by type of pain treatment and adjunctive therapy (i.e., ulcer medications, hypotensives, and antidepressants). Patients’ treatments were assessed at the first quarter and followed through the tenth quarter. Random coefficient models for utilization and cost outcomes were evaluated, by treatment, using mixed model analysis of variance.
RESULTS: Eligible patients (N = 9972) were, on average, 55.1 years old (SD 9.7) and 65.6% were female. Common comorbidities included endocrine or immunity disorders (71.9%), hypertension (59.0%), and obesity (17.6%). At the end of 30 months, the percent change in the number of subjects using COX-2s and NSAIDs indicated a reduction of 76% and 10%, respectively. Individual growth models on utilization and cost for COX-2 (p < 0.001) confirmed the trend. Among NSAID users, 35% used 2 or more different NSAIDs and 18.1% of these had an average time between NSAID switches of 90 days or less. Narcotics showed a significant increasing trend in percentage of days use and costs (p < 0.001). CONCLUSION: Trends over 30 months suggest, increasing narcotic use, high discontinuation of COX-2s, and a high proportion of NSAID patients with switches within 90 days. No single dominant therapy over time appeared in this study suggesting there is a potential for new approaches and reconsiderations for OA treatment.

PAR8
NEW AUDIENCE FOR PATIENT-REPORTED OUTCOMES (PRO) DATA: PATIENTS
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OBJECTIVES: While health care providers find PRO data valuable for managing patients’ care, they also see a need for more patient involvement. This research was conducted to gather input from patients and providers about the value of health outcomes data for patients in the area of rheumatoid arthritis with or without psoriasis. METHODS: We conducted follow-up telephone interviews with a sample of 50 individuals (27 physicians, 11 nurses, 12 patients) who participated in one of two programs associated with rheumatoid arthritis. The programs were designed to provide patient feedback about experiences with a given prescription medication to physicians via one-page graphical reports. The semi-structured interviews included questions regarding providers’ impressions of the feedback and its value for patients. Patients were asked about the program and the value of feedback for them. This qualitative analysis summarizes their responses. RESULTS: Of the 27 physicians interviewed, 56% (n = 15) were dermatologists and 44% (n = 12) rheumatologists. Eleven nurses from dermatology practices and 12 patients with rheumatoid arthritis were interviewed as well. Participants were in general agreement that the feedback was useful for monitoring patients’ responses to treatment, when viewed in conjunction with clinical observations. Many providers stated that they could show the feedback to the patient, “in black and white”, and begin a discussion. Most patients report participating in the programs because they want their physicians to receive the feedback. Many patients also expressed an interest in receiving the feedback themselves to track their progress, independently and relative to other patients. A few physicians echoed this sentiment, stating that through the feedback patients could feel connected and that may increase involvement in their care. Providers however, emphasized that the information be provided in “patient-friendly” terms. CONCLUSION: Based on this research, a new audience for health outcomes data—delivered in simple, straightforward terms—is patients themselves.

PAR9
IMPACT OF PATIENT’S OUT-OF-POCKET COST ON ADHERENCE AND PERSISTENCE WITH BIOLOGIC THERAPIES FOR RHEUMATOID ARTHRITIS
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OBJECTIVES: Assess impact of high patient out-of-pocket expenditures (OOP) on adherence and persistence with biologic treatments for RA. METHODS: An incidence cohort of RA patients with pharmacy claims for etanercept or adalimumab between 2002–2003 was selected from a database of insurance claims from self-insured employer health plans (N = 2311). Adherence was defined as the medication possession ratio (MPR), proportion of the 365 days follow-up covered by days supplied. Persistence was determined using a survival analysis of the likelihood of discontinuing therapy. Patient’s OOP was measured in two ways: 1) patient’s coinsurance and co-payments per week of therapy, and 2) proportion of the biologic medication’s cost paid by patient. Multivariate linear regression models of MPR and proportional hazard models of persistence estimated the impact of cost, adjusting for insurance type and demographic and clinical variables. RESULTS: OOP expenditure averaged $8 per week (SD $14, range $0 to $127). Only a very small proportion of patients (3.9%) paid more than $50 per week. The mean (SD) MPR for all patients was 0.52 (0.31). Adherence significantly decreased with increased weekly OOP (Coeff = -0.0035, P < 0.0001) and when patients paid a higher proportion of therapy costs (Coeff = -0.8890, P < 0.0001). This translates into approximately one week of therapy lost for every $5.50 increase in weekly OOP. Adherence was lower for younger patients, women and those with more comorbidities. Patients whose