ical activity level, exacerbations, and school absences). The impact of the following factors was investigated: family income adequacy, parental education, parent employment, ethnicity, parent immigration, language, parent marital status, and physical environment characteristics. The CPACG and Global Initiative for Asthma (GINA) guideline definitions of asthma control were compared. RESULTS: Only 11% of patients met the requirements for acceptable control by satisfying all six parameters, while 20% satisfied five parameters, and 69% satisfied four or fewer parameters. The multiple regressions indicated that income adequacy had an impact on asthma control. Children from families in the middle income adequacy quintile tended to have worse control. Higher numbers of asthma triggers, increased physician or specialist visits, and daily use of anti-inflammatories, were associated with lower levels of control. The CPACG and GINA guidelines had a high level of agreement (Weighted kappa < 0.74, p < 0.0001), although it was more difficult to achieve acceptable asthma control in the CPACG guidelines. CONCLUSION: Despite the established effectiveness of inhaled corticosteroids in the prevention of asthma exacerbations, poor control remains a problem which was affected by family income adequacy.

ARThritis—Clinical Outcomes Studies

MORTALITY RATE OF PATIENTS WITH RHEUMATOID ARTHRITIS, PSORIASIS, CROHN'S DISEASE AND ULCERATIVE COLITIS IN THE UNITED KINGDOM

Diels JK1, Bala M1, Budd D3
1Jansen Pharmaceutica, Beerse, Belgium, 2Johnson & Johnson, Malvern, PA, USA, 3Johnson and Johnson Pharmaceutical Services, Raritan, NJ, USA

OBJECTIVES: Rheumatoid arthritis (RA), psoriasis (PS), Crohn’s disease (CD) and ulcerative colitis (UC) are autoimmune related diseases. The purpose of this study was to estimate the mortality rate of patients for each of these four conditions, relative to the overall population, adjusting for age and sex differences of each patient group. METHODS: The analysis was based on the THIN database for 2004. This data source is based on the registration in GP-practices for a 4% representative sample of the overall UK population. From the overall-population sample (n = 2,278,100), patients were identified based on the READ codes for each of these conditions in the previous 4 years. A subgroup of severe cases was identified, based on previous drug treatment. The standardised mortality ratio (SMR), defined as the proportion of the observed number of deaths and the expected number, based on the age and gender specific mortality rates for the overall population, was calculated for each patient group. 95% confidence intervals were calculated. RESULTS: 2% of the studied population suffers from one or more of the four diseases: RA (0.44%), PS (1.3%), CD (0.14%) or UC (0.16%). The SMR for all four disease conditions combined was significantly higher (132 [122,143]) compared to the global UK population. Within the four groups, RA (158 [139,179]), CD (165 [108,241]) and PS (116 [103,130]) all showed statistically increased mortality. The SMR was (ns) higher for UC (122, [89,163]). Within each of these disease groups, mortality was higher for severe patients, but did not reach statistical significance, possibly due to the relatively small sample size of these subgroups. CONCLUSION: Patients suffering from Crohn’s disease and rheumatoid arthritis have a 60% increased mortality compared to the overall UK population. Mortality is about 20% higher for patients with psoriasis and ulcerative colitis.

ARThritis—Cost Studies

COST OF PAIN THERAPY FOR OSTEOARTHRITIS IN A PRIVATELY INSURED POPULATION IN THE UNITED STATES

White AG1, Birnbaum H1, Buteau S1, Janagap C2, Schein JR2
1Analysis Group, Inc, Boston, MA, USA, 2Ortho-McNeil Janssen Scientific Affairs, LLC, Raritan, NJ, USA

OBJECTIVES: To assess the health care utilization and associated costs for osteoarthritis (OA) patients, depending on the primary drug prescribed for pain management. METHODS: A claims database of privately insured patients (covering 31 employers, 1999–2004) was used to identify OA patients (ICD-9-CM 715.XX) OA patients were categorized by primary pain drug treatment—defined as greatest days supply, 2003–2004—for pain management (tramadol, acetaminophen w/codeine, Cox-Ils, NSAIDS, short-acting opioids). A tramadol monotherapy cohort was also constructed in which patients were prescribed only tramadol for their pain (i.e., these patients did not receive any of the other primary pain drugs listed above.) Mean annual per patient health care costs were calculated for each drug treatment cohort from a private payer’s perspective. RESULTS: OA patients (n = 32,043) were often prescribed multiple drugs simultaneously and/or sequentially to manage pain. Average annual direct medical costs for OA patients were $8602 (ranging from $6011 to $13,964 depending on the drug treatment cohort). Average annual drug costs for OA patients were $2941 (ranging from $2108 to $8498 depending on the drug treatment cohort). The tramadol monotherapy cohort had lower costs than other cohorts. Cohort cost differences reflect, in part, more severe comorbidity profile and complex temporal treatment patterns. CONCLUSION: Average annual direct costs of OA patients were $11,543, which varies by drug treatment cohort. OA patients use multiple simultaneously and/or sequentially to treat their pain. Prescribing tramadol earlier to treat OA may reduce therapy switching and associated costs and a once-a-day version of tramadol may offer additional convenience, tolerability and sleep improvement benefits for OA patients. Future research is needed to identify the temporal patterns of tramadol use and associated outcomes.

COST-EFFECTIVENESS OF LUMIRACOXIB COMPARED TO CELECOXIB FOR THE TREATMENT OF OSTEOARTHRITIS IN CANADA

Sambrook JC3, Levy AR1, Osenenko K1, Kindundu C2, Barbeau M3
1Oxford Outcomes Ltd, Vancouver, BC, Canada, 2Novartis Pharmaceuticals Canada Inc, Dorval, QC, Canada

OBJECTIVES: To estimate incremental cost-utility ratios for lumiracoxib relative to celecoxib for treating osteoarthritis (OA) in Canada. Secondary comparators including six common treatment algorithms (non-steroidal anti-inflammatory drugs with and without proton pump inhibitors) were also evaluated. METHODS: An existing Markov model with 3 month cycle lengths and 5 year time horizon was adapted for Canada. Analyses were performed from the third-party perspective of the Ontario Ministry of Health. Treatments were assumed to be equally efficacious in treating symptoms of OA. Data on differences in rates of gastrointestinal (GI) and other (renal, skin, hepatic) adverse events were obtained from published randomized trials. Quality-adjusted life years (QALYs) were calculated separately for subgroups defined a priori for age, sex, aspirin use, and history of GI bleed. Common treatment pathways were elicited from clinical experts. Costs of hospitalizations, laboratory tests, professional fees, and medications were obtained from
published sources. Societal utility scores were obtained from a standard gamble study conducted in Canadians. Costs (2006 CDN dollars) and outcomes were discounted at 5%. Incremental cost-effectiveness ratios (ICERs) were estimated relative to lumiracoxib. Sensitivity analyses were conducted for all input parameters to identify influential inputs. RESULTS: Lumiracoxib was more effective and less costly (i.e. dominated) in all subgroups when compared to celecoxib. Compared to celecoxib, lumiracoxib was predicted to reduce clinical and complicated events in non-ASA patients by 10 and 55% respectively. ICERs ranged from $11,253/QALY to $187,203/QALY for average risk patients and became more favorable over the cohort's lifetime. Results were most sensitive to the utility of arthritis and adverse event rates but the interpretation was robust. Compared to the majority of secondary treatment algorithms, lumiracoxib also had an attractive cost-effectiveness profile. CONCLUSION: From an economic perspective, lumiracoxib is an attractive treatment choice for Canadian OA patients and is more cost-effective than celecoxib.

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

Parekh HH, Kamal KM
Duquesne University, Pittsburgh, PA, USA

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 parameters to identify influential inputs. RESULTS: The annual costs for standard treatment were $10,860.96/ASAS 20, while the ICER for ET versus generic IR was $20.48 and the ICER for ER versus branded IR was $118.00 per percentage pain reduction. Sensitivity analyses indicated that the drug cost for ER has the most influence on the cost-effectiveness ratio. CONCLUSION: This analysis suggests the drug acquisition cost of ER may be offset by its clinical effectiveness, resulting in a more cost-effective treatment alternative.

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

Dabbous O1, Rahman M2, Meissner B2, Thompson H1, Tang B1
1Centocor, Inc, Horsham, PA, USA; 2Xcenda, Palm Harbor, FL, USA

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 2003, 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, naive patients, and to identify new PsA patients. Per patient per month treatment (PPPM) costs were 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...