NEUROLOGICAL DISEASES/DISORDERS & PAIN—Economic Outcomes

CHOLINESTERASE INHIBITORS REDUCE INSTITUTIONALIZATION RISK AND MAY REDUCE OVERALL ECONOMIC BURDEN FOR PATIENTS WITH DEMENTIA IN A NATURALISTIC TREATMENT SETTING

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OBJECTIVE: Cholinesterase inhibitors have been shown to delay institutionalization, thus reducing costs. Institutionalization rates, direct, indirect and drug costs were examined in the Canadian Outcomes Study in Dementia (COSID); an ongoing observational cohort study of clinical and economic outcomes for dementia patients in Canada. METHODS: A Cox Proportional Hazards regression model compared institutionalization rates between patients receiving (ChI) or not receiving cholinesterase inhibitors (non-ChI) at the time of enrolment (n = 448). A linear regression model also compared direct outpatient and inpatient costs (e.g. hospitalisations, community services, day surgery), indirect costs (lost caregiver and patient productivity) and drug costs (including and excluding ChI costs) in the ChI and non-ChI groups. Both models adjusted for dementia type, place of residence, disease duration, baseline Global Deterioration Stage and Caregiver Burden (ZBI), age and gender. Follow-up was from baseline to last visit date (between 6 and 18 months). RESULTS: This model-based assessment shows strong evidence that treatment with ChIs is associated with reduced institutionalization risk (RR = 0.262, p = .0032). Because most patients were lost to follow-up on or shortly after institutionalization, this analysis does not account for the cost of institutionalization. However, reducing the rate of institutionalization almost certainly yields significant cost savings. Other significant predictors of risk include baseline ZBI (RR = 1.033 per point, p = .0394) and age (RR = 1.107 per year, p = .0085). The linear regression model for costs demonstrated no significant differences in inpatient (excluding institutionalization), indirect and overall costs between non-ChI and ChI patients. Drug costs were estimated to be $134 per month greater for the ChI group than the non-ChI group ($168 vs $34, p < .0001). CONCLUSIONS: The use of ChIs appeared to have a significant effect on institutionalization rates and drug costs, but not on other cost drivers in this disease. The reduced rate of institutionalization likely translates into cost savings for the ChI treatment strategy.

ECONOMIC IMPACT OF TREATMENT OF DEMENTIA FOR GERMANY—A PROGNOSIS TO 2050

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OBJECTIVE: To assess the development of costs for dementia in Germany until 2050 under different demographic scenarios and the possible impact of treatment interventions with acetylcholinesterase inhibitors from various perspectives. METHODS: A model to estimate cost differences in dementia treatment with acetylcholinesterase inhibitors compared to a placebo scenario was developed. The model projects the number of dementia patients in Germany until 2050 under the assumption of extended life expectancy and immigration. Markov modeling allows documenting the progression of dementia patients into more severe disease stages. Data of the population development are supplied by the Federal Bureau of Statistics and the German Institute for Economic Research. Number of patients are calculated from demographic prognoses considering prevalence of disease data from a published metaanalyses of the epidemiology of dementia. Data about transition probabilities between different disease stages are derived from a randomized clinical trial of an acetylcholinesterase drug. Disease stage specific costs are taken from a cost of illness study previously published. RESULTS: The number of dementia patients will increase from 1 million to 2.5 million over the next 50 years in Germany. With treatment, there will be 30% less patients in the most severe, and hence most costly disease stage. Costs for treatment are offset by cost savings through a shift of patients to less severe disease stages, if indirect family and caring costs are considered. Reduction of direct costs due to treatment increase from €0.5 to €1.5 billion and indirect cost reductions are fourfold these figures. For 2000, net savings of €1.4 billion are demonstrated for the societal perspective. Results are stable for extensive sensitivity analysis. CONCLUSION: Results document that dementia treatment is economically attractive in an aging society.

SOCIO-ECONOMIC IMPACT OF CHRONIC DAILY HEADACHE IN THE GENERAL POPULATION IN FRANCE

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OBJECTIVES: Surveys based on patient registries in headache clinics have concluded that a significant proportion of headache sufferers have chronic daily headaches (CDH). However, there is as yet no information on the socio-economic impact of CDH in the general population. To address this shortcoming, we have conducted this study. METHODS: We have exploited the data obtained in a recent large, nationwide study of the clinical epidemiology of headache disorders performed in France (GRIM-2000). This study screened 10585 subjects, representative of the total French population, and involved face-to-face interview with 1486 subjects identified as suffering from headaches. A positive reply to question “Do you suffer from headaches every day?” led to a diagnosis of CDH. As well as collecting epidemiological data, this study also assessed data on the clinical presentation, quality of life, disability, and healthcare consumption. Individuals with CDH were compared to subjects with migraine as diagnosed according to IHS criteria. RESULTS: The prevalence of CDH in French general population was 2.95%. Prevalence was significantly higher in females than in males. The CDH individuals were older than migraine sufferers. A significant degree of disability was confirmed in CDH individuals who scored worse than migraine sufferers. Individuals with CDH also scored worse than those with migraine for quality of life. Concerning the consumption of healthcare resources, main results were that: (i) the number of visits to GPs was significantly greater in CDH individuals than in migraine sufferers; (ii) psychiatrists were the medical specialty most often consulted, (iii) drug consumption was over six times higher in the CDH group than in the migraine group. CONCLUSIONS: This study indicates that CDH is associated with an important burden of suffering in the general population and with considerable expenditure in the health service.

OBJECTIVES: Prior studies of direct costs of back pain have primarily used Workman’s Compensation claims, resulting in varying cost estimates and limiting generalizability of findings to specific employee groups. The objectives of this study were to determine the direct costs of back pain among the general population and to stratify those costs by type of medical care. METHODS: Retrospective analysis was conducted of the 1996 Medical Expenditure Panel Survey. The survey files included data collected from a nationally representative sample of 22,601 respondents and from respondents’ medical care and health insurance providers. Data included medical conditions, use and payments for medical care, and health insurance and employment information. Back pain patients were identified using ICD-9-CM codes determined by an expert panel of physicians and coders as indicative of back pain. Direct costs were calculated using patient and third-party payments for back pain related medical events by category of back pain and type of medical care. Sample estimates were projected to the population and 95 percent confidence limits were calculated using the Taylor expansion method. RESULTS: The direct

SWITCHING AND PERSISTENCY IN A NSAID AND COX-2 SPECIFIC INHIBITOR USER POPULATION IN MANAGED CARE
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OBJECTIVES: Our objectives were to examine patterns of medication switching, treatment discontinuation, and associated costs in subjects treated with COX-2 specific inhibitors or non-selective NSAIDs in a managed care setting. METHODS: We conducted a retrospective claims analysis in 19 managed care health plans in the United States to evaluate three cohort groups treated with celecoxib, rofecoxib, or commonly prescribed non-selective NSAIDs between July 1, 1999 and June 30, 2000. Medication utilization, switching, discontinuation, and costs associated with medication switching and discontinuation were evaluated. We used propensity score analysis to match cohorts to reduce possible sampling selection bias. RESULTS: 164,596 subjects were assigned to the celecoxib (n = 9,475), rofecoxib (n = 7,734) or non-selective NSAID groups (n = 147,387). COX-2 specific inhibitor users were significantly less likely to switch therapy (23% less likely by odds ratio test [p < 0.001]) and had a lower rate of discontinuation compared to NSAID users (7.2 vs. 18.7 discontinuations per 1000). Cox proportional hazards analysis demonstrated that persistency on therapy is higher for COX-2 users (57% less likely to discontinue) versus NSAID users. Patients remained longer on celecoxib before discontinuation compared to subjects in any other cohort (celecoxib 63.7 days, rofecoxib 58.9 days, ibuprofen 21.1 days, naproxen 27.8 days, and diclofenac 34.4 days). Age was also associated with longer time on therapy, with older age decreasing the likelihood of discontinuation by 2%. Switching therapy increased total costs by 21.9% (p < 0.01). Outpatient, inpatient, and emergency room costs increased in subjects who switched therapy compared to those who remained on therapy, when COX-2 specific inhibitor and NSAID matched cohorts were compared. CONCLUSIONS: Less medication switching and longer persistency were seen in patients treated with COX-2 specific inhibitors. Medication switching was associated with increased treatment costs. The increased resource use may be ascribed to adverse events, which may be higher in the non-selective NSAID cohorts.