

primary insomnia and the relative risk of the health consequence in persons with versus without insomnia. Based on published sources, we estimated the prevalence of chronic primary insomnia to be 2.3% and relative risks to be as follows: car crashes, 2.5; work accidents, 1.5; home/public accidents, 2.5; alcohol abuse, 2.3; illicit drug abuse, 1.9; nicotine dependency, 2.4; and depression, 5.4. **RESULTS:** Total annual societal cost of chronic primary insomnia in the U.S. was estimated to be US\$24.6 billion in 2003. Depression accounted for the largest share of the cost burden (34%), followed by alcohol abuse (25%), nicotine dependency (20%), drug abuse (14%), work loss (6%), accidental injuries (2%), and prescription insomnia medications (1%). Sensitivity analysis indicated the findings were most sensitive to the prevalence of chronic primary insomnia and the relative risk of illicit drug abuse. **CONCLUSIONS:** The economic burden of chronic primary insomnia is substantial. Reducing the severity and prevalence of chronic primary insomnia may yield considerable economic benefits.

PNL18**DIRECT COST BURDEN OF MIGRAINE AMONG MEMBERS OF US EMPLOYER GROUPS**

Hawkins K¹, Rupnow M², Wang S³

¹Thomson-Medstat, Ann Arbor, MI, USA, ²Ortho-McNeil Janssen Scientific Affairs, LLC, Titusville, NJ, USA, ³Thomson-Medstat, Cambridge, MA, USA

OBJECTIVES: To estimate the direct healthcare cost burden of migraine in a large commercially insured United States (US) population. **METHODS:** The data source for this study was the MEDSTAT MarketScan database, comprised of medical, pharmaceutical, and enrollment information on employees for 52 employer groups for the calendar year 2004. Subjects with a diagnosis of migraine or use of a migraine-specific abortive drug were identified as the migraine cohort. A random sample of patients without migraine was propensity score matched, based on demographic characteristics and comorbidity index, to the migraine cohort to yield a matched control group. Expenditures between migraine and matched control cohorts were compared to derive the burden of illness attributable to migraine. **RESULTS:** The analyses included 215,209 subjects in the migraine cohort, and equal number of subjects in the control group. The mean age was 41 (SD = 13.3), and 82% were female. After matching, the cohorts were similar with respect to age, gender, geographic region, urban residence, insurance type, the number of psychiatric diagnostic groups and Charlson comorbidity index. The migraine cohort incurred significantly higher expenditure than the control cohort in all categories (prescriptions, outpatient, ER, and inpatient). Total health care expenditures were \$2571 per patient per year (PPPY) higher in the migraine group (\$7007 versus \$4436 PPPY in the control group; $p < 0.001$). **CONCLUSIONS:** The migraine cohort was associated with significantly higher total health care expenditures compared to a matched control, based on recent data from a large sample of commercially insured individuals. This data suggest that US employers are bearing a considerable direct cost burden as a consequence of migraine.

PNL19**ECONOMIC BURDEN OF RESTLESS LEGS SYNDROME IN A PRIVATELY-INSURED POPULATION**

Curtice TG¹, Long SR², Baser O³, Montejano LB⁴, Lobo F⁵

¹Boehringer Ingelheim Pharmaceuticals, Inc, Ridgefield, CT, USA, ²Thomson Medstat, Hampden, ME, USA, ³Thomson Medstat, Ann Arbor, MI, USA, ⁴Thomson Medstat, Washington, DC, USA, ⁵Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA

OBJECTIVES: Although studies have explored the utilization of healthcare services in patients with restless leg syndrome (RLS), expenditure data are not available. This study assesses the incremental economic burden of illness with RLS. **METHODS:** A retrospective claims database analysis was conducted using Medstat's MarketScan Commercial Claims and Encounters database from 1999 through 2003. Patients were identified having ≥ 1 RLS diagnosis (ICD-9 333.99) with the earliest claim as the index event. Inclusion criteria required continuous enrollment 6 months pre- and 12 months post-index event. Patients were excluded if they were identified as having Parkinson's disease, post-traumatic neurosurgery, or psychiatric conditions (other than depression and insomnia); or if they had a drug claim in the pre-index period for levodopa, dopamine agonists, opioids, anticonvulsants, amantadine or clonidine. A control group without a diagnosis for RLS and similar inclusion/exclusion criteria as the RLS group was selected using a 1:1 propensity score match. Post-index outcomes included health care utilization and expenditures (2003 dollars), along with multivariate analysis used to determine the incremental economic burden associated with RLS. **RESULTS:** The RLS group consisted of 2319 patients with an average age of 49.8 years and was 64% female. In the post-index period, RLS patients had higher total expenditures than controls (\$8843 vs \$4378), with highest costs from outpatient services (\$4549 vs \$2144, respectively). In the multivariate analysis, the incremental difference in overall expenditures between the RLS cohort (\$7257) and controls (\$4809) was \$2448 ($p < 0.001$). **CONCLUSIONS:** Expenditures for RLS treated patients are significantly higher when compared to a matched, control cohort of patients, with the highest costs coming from outpatient services. More research is warranted to identify if there are ways to decrease these additional costs while maintaining or improving treatment of patients with RLS.

PNL20**HEALTH CARE ECONOMIC BENCHMARKS FOR MULTIPLE SCLEROSIS IN A COMMERCIAL MANAGED CARE ENVIRONMENT**

Prescott J

The MCM Group, Marlton, NJ, USA

OBJECTIVES: Benchmark direct health care costs and utilization for patients with multiple sclerosis (MS) in a commercial managed care environment. Observe how demographic, administrative, and clinical variables affect MS costs and utilization patterns. Examine the economic impact of treating MS with disease modifying drugs (DMDs). **METHODS:** Using a proprietary methodology developed by the MCM Group, administrative claims data (obtained from the PharMetrics Integrated Patient-centric Database) were combined with Symmetry Health's Episode Treatment Group™ (ETG™) illness-classification and episode-building software. Patients were included in the study based on the presence of ETGs 149 or 150 (inflammation of the CNS) and diagnosis of MS (ICD-9 code 340.*) during any of calendar years 2002, 2003, or 2004. Clinical and economic information related to utilization of medical and pharmacy services was captured using ETG-defined episodes of care, consisting of observations made over 365 days. **RESULTS:** Over the 3-year study period, 41,425 patient-episodes were analyzed, with 10,099 analyzed for 2004. Total costs of a 2004 MS episode were \$12,879, 65% of which were attributable to prescription drugs and more than 26% to outpatient care. Many variables affected episode costs, including concurrent conditions; for example, episode costs increased considerably whenever abnormality of gait (\$20,871) or optic neuritis (\$39,247) was present. In comparing episodes reporting use of DMDs, the various interferon product classes and other immunomodulators reflected