AD patients were not on anti-alzheimer’s medication both in 2005 and 2006. Closer scrutiny on these trends is required to alleviate AD disease burden.

PND25
TREATMENT PATTERNS AND PATIENT CHARACTERISTICS IN PARKINSON’S DISEASE (PD): RESULTS FROM A LARGE MULTI-CENTER NEUROMONITOR INITIATIVE IN SPAIN
Narayanan S1, Pedrosa RG2
1TNS Healthcare, Stamford, CT, USA, 2TNS Healthcare, Madrid, Madrid, Spain

OBJECTIVES: To assess treatment patterns and associated patient characteristics among PD patients in a multi-center setting in Spain, and generate estimates at country-level. METHODS: NeuroMonitor is an annual study conducted among neurologists in hospitals and private practices to collect chart data (disease/patient characteristics & treatment patterns) on patients receiving medications to treat neurologic conditions during the study window/encounter. Current analysis of PD patients in Spain utilized 2006 data from 102 neurologists & 1030 patient charts. A multi-stage weighting method at physician/patient level was employed to extrapolate data to Spain population. RESULTS: Among patients receiving neurologic agents in 2006, over 8,500 patients were estimated to have PD (average age: 71 yrs; female: 40%; disease stages per H&Y scale, I: 13%, II: 37%, III: 34%, IV: 12%, V: 1%). Majority (87%) of PD-patients were diagnosed by neurologists, and 42%, 21% & 37% of patients were diagnosed within 1-yr, 1–2 yrs & >2- yrs respectively. Key comorbidities included: Hypertension (53%), dyslipidemia (29%), diabetes (26%), osteoarthritis (24%), depression (26%) & anxiety/ dementia (12% each). Majority (98%) of PD-patients received anti-parkinson’s medications, with sparse use of antidepressants (2%) and anticholinergics/antipsychotics/anti-alzheimers/ hypnotics-sedatives (1% each). Among those using anti-parkinson’s medication, utilization patterns varied by disease severity—levadopa-based: total-77%, mild-62%, moderate-91%, severe-96%, cabergoline: total-15%, mild-12%, moderate-16%, severe-20%, pramipexole: total-14%, mild-16%, moderate-11%, severe-12%, ropinirol: total-11%, mild-10%, moderate-11%, severe-18%, selegiline: total-9%, mild-9%, moderate-8%, severe-9%, entacapone: total-7%, mild-3%, moderate-8%, severe-22%, rasagiline: total-5%, mild-6%, moderate-4%, severe-5%. CONCLUSION: Almost half of PD patients were diagnosed within last 1-yr and majority had moderate disability. In spite of prevalence of psychiatric comorbidities, only few patients were on appropriate concomitant medications. Levodopa-based PD regimen use was widely prevalent, followed by dopamine-agonists; extent of use differed by disease severity. Further research is warranted to assess the impact of these patterns on long-term outcomes.

PND26
USE OF A COUNSELLING GUIDELINE FOR THE DETECTION OF DRUG RELATED PROBLEMS IN PARKINSON’S DISEASE
Schroeder S1, Schafer M2
1Charité University Medicine Berlin, Berlin, Germany, 2Institut für Klinische Pharmakologie, Berlin, Germany

OBJECTIVES: Drug-related problems (DRPs) are very likely to occur among patients with Parkinson’s disease (PD). With regard to the complexity of PD’s long-term treatment regimen, there is an increasing need for the systematic monitoring of drug therapies in outpatient settings. The aim of this study was to evaluate the advantages of a counselling guideline for the detection of DRPs in Parkinson patients used in community pharmacies.

METHODS: The counselling guideline included standardised questionnaires on the drug treatment and a checklist of common DRPs induced by antiparkinsonian agents, part of which were reported by patients in supervised internet forums. Thirty-two pharmacies in Germany were recruited for the study. In accordance with the guideline each pharmacy monitored PD patients for eight months. A total of 112 patients were included to the study and checked for potential or actual occurrences of DRPs. The DRPs were then categorised using the Problem Intervention Documentation (Pl-Doc). Medication profiles and dose regimens were adjusted in cooperation with the treating physician where appropriate. RESULTS: In total, 331 DRPs were identified. Lack of medication despite indication, especially for non-motor symptoms (26.6%), adverse drug reactions (12.4%), inappropriate time of administration (10.0%), under-dosage (9.7%) and drug interactions (9.4%) accounted for the highest percentage of DRPs. Pharmacists’ use of the counselling guideline led to an improvement of the drug regimen in more than half of the cases (52.6%). In addition, four patients were identified who were misdiagnosed with PD. CONCLUSION: The disease specific counselling guideline supports the detection of DRPs and should be part of routine assessment of patients with PD.

PND27
ESTIMATING MARGINAL COST-EFFECTIVENESS USING A PERSON-LEVEL NET BENEFITS APPROACH WITH AN APPLICATION TO DISEASE-MODIFYING DRUGS IN MULTIPLE SCLEROSIS
Brown MG1, Skedgel C1, Hicks VA2, Sketris IS2, Fisk JD1
1Capital Health Nova Scotia, Halifax, NS, Canada, 2Dalhousie University, Halifax, NS, Canada

OBJECTIVES: To demonstrate the feasibility of a person-level net benefits (NB) approach to estimating marginal cost-effectiveness, with an application to disease-modifying drugs (DMDs) in multiple sclerosis (MS). The NB approach to estimating cost-effectiveness has been shown to overcome statistical issues associated with the conventional incremental cost-effectiveness ratio. A person-level NB approach can be used to estimate marginal cost-effectiveness and confidence intervals.

METHODS: The NB variable value for each data point was calculated as MS-specific or generic health status (HS), weighted by a threshold willingness-to-pay per QALY gain (λ), less direct costs (NB = H5.λ − (cDMD + cHC)). A fixed effects model regressed NB against explanatory variables, including years since MS onset and DMD treatment years. β-coefficients for explanatory variables represent their marginal contributions to overall NB. For DMD treatment years, the λ at which β = 0 represents the threshold willingness-to-pay per QALY, where marginal monetized health outcomes equal marginal (net) costs. The study population includes all 1995–2004 residents of Nova Scotia, Canada, with relapsing-onset definite MS treated with DMDs under a universal insurance program begun in 1998 and delivered by the Dalhousie MS Research Unit clinic. Data included repeat-visit measures of MS-specific disability (Expanded Disability Status Scale), generic health-related-quality-of-life (Health Utilities Index Mark III), DMD costs (cDMD) and annual direct health care costs (cHC) for physician, hospital and pharmacare utilization. RESULTS: β-coefficients estimated with the NB model moved in the expected direction as λ was varied. The β-coefficient on DMD treatment years was strongly negative at relatively low willingness-to-pay thresholds and increased with λ. CONCLUSION: The person-level NB approach is feasible. It generates marginal cost-effectiveness estimates that have statis-
cal properties superior to conventional estimates of incremental cost-effectiveness and that do not depend upon an arbitrary analysis horizon. From an economic perspective, marginal estimates are preferred to incremental, or average, estimates.

PND28
COMPARISON OF FOUR PREFERENCE-BASED SF-36/ SF-12 ALGORITHMS TO EVALUATE THE COST-EFFECTIVENESS OF TREATMENT FOR PRIMARY INSOMNIA WITH ESZOPICLONE
Snedecor SJ1, Botterman MP1, Schaefer R2, Barry N2, Rubens R3, Pickard AS3
1Pharmerit North America, LLC, Bethesda, MD, USA, 2Sepracor Inc, Marlborough, MA, USA, 3College of Pharmacy, University of Illinois at Chicago, Chicago, IL, USA

OBJECTIVES: To compare incremental cost effectiveness ratios (ICERs) obtained with different algorithms to relate quality of life (QoL) instruments to preference-based utilities.

METHODS: We determined the ICER of treating primary insomnia with eszopiclone compared to placebo treatment based on a model developed using data from a 6-month, double-blind, placebo controlled, clinical trial to assess the quality-adjusted life years (QALYs) and costs associated with eszopiclone treatment. The average 6-month net cost per patient treated with eszopiclone versus placebo is $69 (2006 USD). QoL data were collected in the trial using the SF-36. Utilities were derived using 4 algorithms chosen for methodological merit (Brazier 2002), applicability to a US population (Franks 2003 & 2004, Lawrence 2004), and ability to generate an age- and gender-independent utility (all). All utilize either the SF-12 or the SF-6D subsets of the SF-36, but differ by: choice of utility mapped from the QoL instrument (standard gamble or EQ-5D); items or subscales of the instrument retained; weighting assigned to the items or subscales; source of the sample used to value the instrument (UK or US); and theoretical range of the predicted utility (e.g., Brazier ranges from 0.35 to 1.0 where Lawrence ranges from 0.15 to 1.01). Other algorithms were not analyzed because they were not generic measures, not preference-based, or excluded the vitality domain (a clinically relevant domain for patients with insomnia).

RESULTS: The four algorithms resulted in average net gains in 6-month QALYs with eszopiclone over placebo of 0.006687, 0.012447, 0.013714, and 0.013800, for the Brazier, Lawrence, Franks (2004), and Franks (2003) algorithms, respectively. These data represent mean costs per QALY of $10,261, $5,513, $5,003, and $4,972, respectively. CONCLUSION: These algorithms, based on either SF-12 item responses or summary scales, generated cost effective yet different point estimates for net gain in utilities and the resulting ICERs.

PND29
RETROSPECTIVE MEASUREMENT OF UNCODED DISEASE OUTCOMES IN A CLAIMS DATABASE
Krukas MR, Berenson K, Hendlish S, Doyle J
Analytica International, New York, NY, USA

OBJECTIVES: To develop an analytic method to measure uncoded disease outcomes in a retrospective claims database.

METHODS: An analysis of multiple sclerosis (MS) patients in a large, vertically integrated health care system database was conducted with the primary outcome of interest being a relapse event. MS only has only one International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code, which does not specify whether the claim was a result of a relapse or other event. A review of the literature found no surrogate markers or composite scores that could be identifiable in claims data. Though Magnetic Resonance Imaging (MRI) is useful in the treatment of MS, typical claims only report whether or not a scan was performed and no results or reason for the scan are available. Utilizing information from published literature and a physician panel, a treatment pattern was identified that could be used in a claims database and would indicate a relapse in MS patients—two consecutive days of an IV steroid (either methylprednisolone or dexamethasone). The date of relapse was recorded as the first date of IV steroid treatment. RESULTS: Using a retrospective claims database, a multiple sclerosis (MS) population utilizing one of four major MS drugs (341 patients) was identified. Within the study period (1994–2005), 67 relapses occurred, defined as two consecutive dates of IV steroid therapy, which is a common clinical treatment for symptoms related to MS relapse. This method did not identify all relapses in the study population; it would be necessary to identify more clinical combinations to achieve comparable relapse rates as those found in the published literature. CONCLUSION: Uncoded events can be identified using clinical treatment measures, which are prominent in claims databases.

PND30
ANALYSIS OF TRIPATAN REFILLING BEHAVIOR AMONG FEMALE MIGRAINEURS
Puenpatorn RA, Victor TVW
Endo Pharmaceuticals, Chadds Ford, PA, USA

OBJECTIVES: To evaluate the factors of triptan refilling behavior of newly diagnosed female migraineurs. METHODS: This retrospective analysis utilized data from the i3/Innovus Lab/Rx database for the period between June 2002 and May 2006. Included in this study were females between 12 and 49 years of age with a clinical diagnosis of Migraine (ICD-9-CM 346.xx), who filled a prescription for a triptan within two weeks of their first observed migraine diagnosis date (index date). Patients were required to have 18 months of continuous eligibility. Logistic regression models were used to evaluate the factors affecting triptan refilling behavior. RESULTS: A total of 14,343 females were included in the analysis. Within the 12-month post-index period only 6.5% of the sample filled two or more triptan prescriptions. Approximately one-third (38.2%) of these patients filled their first triptan prescription on their index migraine diagnosis date, while nearly half (46.8%) filled their first triptan prescription within 14 days before their index date. The logistic regression results showed that for each $10 increase in patient copay, the odds of a subsequent triptan prescription refill decreased by 8%. Similarly, for each $10 increase in patient deductible, the odds of refilling decreased by 4%. Moreover, HMO patients were 18% less likely to refill their prescriptions compared to EPO patients. Higher pill counts are associated with lower probabilities of refilling behavior. Pearson chi-square tests supported the goodness-of-fit of the test results. CONCLUSION: These data suggest that most female migraineurs do not fill more than one triptan prescription over a one-year time horizon. Out-of-pocket patient expenses appeared to be the important factors affecting refill behavior. One implication of these findings is that many women may be suffering because of inappropriate management of their migraine-related pain. Further research into the reasons and motivations for these outcomes are warranted.