health care costs per controlled patient. Sensitivity analysis showed that the base study case was robust.

**PND4**

**PREGABALIN VS GABAPENTIN IN THE TREATMENT OF NEUROPATHIC PAIN IN ITALY: A COST-EFFECTIVENESS ANALYSIS**

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**OBJECTIVE:** To compare the economic impact of treating neuropathic pain with pregabalin versus gabapentin in Italy.

**METHODS:** A cost-effectiveness analysis comparing costs and effects of pregabalin 375 mg/die versus gabapentin 1800 mg/die in the perspective of the Italian National Health care Service was developed. The cost effectiveness is examined alternatively in terms of the incremental cost per additional day with no or mild pain, and the incremental cost per quality-adjusted life-year (QALY) gained. Effects were derived from pregabalin randomized clinical study 1008-155 and gabapentin 645-210 and 945-211 studies. Effects are expressed as score reductions on the VAS pain scale. Pharmacological costs were quantified according to the Italian market price of the drugs; health care procedure and hospitalization costs were quantified on the basis of the National Tariff. Other health care services consumption data were derived from a Delphi Panel. To estimate daily pain experience in patients with neuropathic pain, and the impact of pregabalin and gabapentin on it, a stochastic model is used. The dynamic simulation focuses on a hypothetical cohort of 1000 patients and simulates their daily pain over 12 weeks, to estimate clinical and economic outcomes for the group as a whole.

**RESULTS:** The cost-effectiveness ratio for the use of pregabalin is less than 1 euro per additional day with no or mild pain and €468 per QALY gained. The sensitivity analysis conducted to examine the effects of decreasing gabapentin dose to 1200 mg/die shows consistency of the model results. **CONCLUSIONS:** Although pregabalin pharmaceutical costs are higher than gabapentin costs, the analyses prove pregabalin to be more effective with a small additional cost per day with no or mild pain.

**PND5**

**TREATMENT OF EARLY PARKINSONIAN PATIENTS WITH RASAGILINE OR ROPINIROLE. WHAT IS THE MOST COST-EFFECTIVE TREATMENT STRATEGY IN FINLAND?**

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**OBJECTIVE:** Levodopa is the “gold standard” for the symptomatic treatment of Parkinson’s Disease (PD) but its benefits decrease as the disease progresses and motor complications appear over time. To delay these complications and the need for levodopa, dopamine agonists (DAs) have been employed as monotherapy. Our aim was to perform a cost-effectiveness analysis of initiating treatment with rasagiline versus ropinirole in delaying therapy with levodopa in early PD.

**METHODS:** A 5-year probabilistic Markov model simulating treatment pathways of early parkinsonian patients was used to estimate the incremental cost-effectiveness ratio of starting treatment with rasagiline or ropinirole. Transition probabilities were derived from randomized clinical trials and the effectiveness measure was the number of years until levodopa was required. Since the greatest portion of direct medical costs of early PD can be attributed to medication, the model focused on pharmacological treatment costs and more especially on pharmacy selling prices. In accordance with Finnish health economic guidelines, a 5% discount rate was applied to both costs and benefits.

**RESULTS:** Beginning treatment of early PD patients with rasagiline delayed time before levodopa initiation of one year compared with ropinirole (3.8 vs. 2.8 years). Incremental cost-effectiveness was in favor of rasagiline with an ICER of €1200 per year gained without levodopa. Initiating treatment with rasagiline has a 95% probability of being cost-effective supposing that ropinirole dosage varies linearly among time.

**CONCLUSION:** This economic model suggests that initiating treatment with rasagiline for early PD is more effective in delaying time to levodopa compared with ropinirole. Further studies are required to link the surrogate endpoint (time without levodopa) to final outcomes (QALY, mortality, morbidity).

**PND6**

**RETROSPECTIVE EVALUATION OF THE DOSES OF BOTOX AND DYSPORT IN THE MANAGEMENT OF DYSTONIA—A COST MINIMISATION ANALYSIS**

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**OBJECTIVES:** There are two preparations of Botulinum toxin type A—BOTOX and Dysport. Based on BNF prices, the dose ratio (units of Dysport : BOTOX) for cost equivalence is 4.2 : 1, however the two products are not interchangeable and there is no handy conversion factor. This study examined the dose requirements in a cohort of patients with dystonia who were stabilised first on Dysport then on BOTOX. The main objective was to evaluate the costs of each product in clinical practice.

**METHODS:** Data was extracted retrospectively from case notes. Patients were included in the analysis if they had received each product for at least one year and had demonstrated a response to both. Those changed back to Dysport at any time during the 2-year period following the switch were excluded. Injections given in the 1-year period before the switch and between 1 and 2 years after the switch were included in the analysis. The mean dose of each toxin, the ratio and corresponding costs (from latest BNF) were calculated.

**RESULTS:** Forty-two patients received 300 administrations. For spasmodic torticollis (36 patients) the mean doses of BOTOX and Dysport were 89 (range 53 to 120) and 397 (range 200 to 500) units respectively. The mean ratio for this indication (Dysport : BOTOX) was found to be 4.48 : 1 (95% confidence interval 4.22 : 1 to 4.73 : 1; range 2.6 : 1 to 6.3 : 1). For this indication, the mean costs per administration were found to be ≤115 and ≤122 based on units used and ≤140 and ≤153 based on whole vials for BOTOX and Dysport respectively. Similar ratios were found for other types of dystonia giving an overall mean dose ratio of 4.56 : 1 (Dysport : BOTOX).

**CONCLUSION:** This study is consistent with previous work that has shown that BOTOX is associated with lower costs than Dysport.
management in adult patients with refractory epilepsy in Spain.

METHODS: A cross-sectional and retrospective study was designed. Male and female adult patients (above 18 years) with refractory epilepsy were enrolled in neurology medical settings between March and September 2005 in Spain. Health care and non-health care resources were collected and total costs calculated according with published prices for year 2005. Quality-of-life, level of anxiety and depression, health state, concomitant medications and comorbidity history and treatment of epilepsy were also recorded. A secondary analysis including a forward stepwise multivariate regression model exploring possible explicative variables was performed. RESULTS: Seven-hundred-sixty-two consecutive patients [728 evaluable (95.5%); 50.8% males, 40.5 (13.5) years, 24.3 (13.4) years of evolution] were included through the country at epilepsy units, neurology outpatient clinics and hospital outpatient clinics. A moderate explicative model was built; adjusted R² = 0.24 (F = 26.6, p < 0.0001). Presence of mental retardation and social function domain of the QOLIE-10 were the variables with most explicative weight of total cost in these patients; standardized estimates of 0.303 and 0.175, respectively [α coefficient (standard error) of 6675.0 (826.8) and 53.5 (12.7), p < 0.001 in both cases respectively], Health status on a 0–100 mm-VAS (standardized estimate; 0.142), need for additional non-neurological hospital assistance (0.118), previous episode of secondarily generalized seizures (0.102), health care at neurology outpatient clinics (0.083), and documented etiology of epilepsy (0.096) were all found to be significant explicative variable, all of them p < 0.05. CONCLUSIONS: This secondary analysis found a broad sources of drivers of costs in patients with refractory epilepsy in Spain, with mental retardation and social function domain of QOLIE-10 (the higher the score the higher the cost) being responsible for a substantial part of total cost.

PND8

COST-EFFECTIVENESS OF TREATING RESTLESS LEGS PATIENTS WITH PRAMIPEXOLE COMPARED TO NO TREATMENT IN SWEDEN

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OBJECTIVE: To estimate the cost-effectiveness of pramipexole versus no treatment in patients with moderate to severe restless legs syndrome (RLS) in Sweden taking the societal perspective.

METHODS: A cost-utility Markov model was developed that included five health states (no, mild, moderate, severe and very severe RLS) based on the International RLS Study Group Rating Scale scores. The probability of moving between health states was derived from the phase III, randomized, double-blind pramipexole trials in RLS. To comprehensively estimate quality-adjusted life years (QALYs) several approaches were taken to map the IRLS to the EQ-5D including Delphi panel, patient survey and published literature. Treatment patterns were estimated with a physician expert panel. 2005 unit costs were derived from Swedish government sources. Both one-way and probabilistic sensitivity analyses were conducted. RESULTS: Over a one-year time period, treatment with pramipexole reduced overall costs by SEK 1191 (approximately €128) per patient and was associated with a gain of 0.035 QALYs relative to no treatment when using utilities from the Delphi panel. Pramipexole’s dominance from the societal perspective against the no treatment alternative was robust to sensitivity analysis. Sensitivity analyses included variation in health care provider costs, different utility assumptions, and an extension of the model to a five-year time period. CONCLUSIONS: Active treatment of RLS with pramipexole is preferred over no treatment for patients with moderate to very severe RLS in Sweden.

PND9

COST UTILITY ANALYSIS OF LEVODOPA-CARBIDOPA VS LEVODOPA-CARBIDOPA-ENTACAPONE IN PARKINSON DISEASE IN MEXICO

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OBJECTIVE: To estimate the cost-utility of levodopa-carbidopa and levodopa-carbidopa-entacapone in the treatment of Parkinson disease in the Mexican Institute of Social Security in Mexico.

METHODS: Cost-utility analysis. Use of resources information was obtained from a retrospective cohort and was validated by a Mexican expert panel. Costs were estimated from financial information from IMSS, and are reported in US 2006 dollars. The source of utility information, measured in QALYs, and transition probabilities was a meta-analysis and a Mexican expert panel. Study perspective used: public health services provider (IMSS); five years time horizon, 3% real discount rate. A decision tree with a Bayesian approach and a Markov model were used. Mean cost-utility, incremental ratios and net health benefits were estimated. The sensitivity analysis included one-way, two-way, threshold and probabilistic with Monte Carlo simulation. RESULTS: Cost per utility unit for levodopa-carbidopa was $5623 and for levodopa-carbidopa-entacapone, $5168. Incremental cost-utility ratio using levodopa-carbidopa as a comparator was $1585. Independently of WTP, levodopa-carbidopa-entacapone had larger net health benefits than levodopa-carbidopa. In the five years analysis, levodopa-carbidopa-entacapone showed 12.8% more utility in relationship to levodopa-carbidopa, with 3.5% more costs. The cost per utility unit with levodopa-carbidopa-entacapone had an accumulated decrease of 18.4% during the period of time analyzed. The acceptability curves and the component analysis of the ellipse graph showed that with the actual cost that the IMSS is investing in the treatment of Parkinson disease, the cost-utility proportion of levodopa-carbidopa-entacapone would be 80%. CONCLUSIONS: Levodopa-carbidopa-entacapone had the lowest cost per unit of success in the treatment of patients with Parkinson disease compared with levodopa-carbidopa. Cost per additional utility unit of levodopa-carbidopa-entacapone was $1585. At the end of the follow-up levodopa-carbidopa-entacapone reduced annual health care costs to a greater extent than levodopa-carbidopa and provided better quality of life per patient.

PND10

A FUNCTIONAL ANALYSIS OF THE RELATIONSHIP BETWEEN AGE AND MIGRAINE IN THE UNITED STATES OF AMERICA

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OBJECTIVE: The objective of this study was to evaluate the indirect evidence of menstrual migraine headache by examining migraine headache prevalence as a function of age. Investigators have reported that the risk of migraine headache decreases with age but have not fully described the nature of the decline based on sex.

METHODS: This study was based on data from the adult sample of the 2003 National Health Interview Survey (NHIS). The study sample consisted of 17,394 females and