

for Sweden [1]. Sensitivity analysis was associated with ICERs ranging up to SEK 900,000 (€93,856) per QALY gained. **CONCLUSIONS:** Due to the data limitations, HE modeling in the orphan drug setting is challenging. Analysis could be performed as requested by Sweden's Dental and Pharmaceutical Benefits Agency (TLV), however, providing evidence that health benefits can provide good value for money even for an orphan population. DLI received a positive reimbursement recommendation by the TLV. [1] Persson U, Hjelmgren J (2003).

PND28**COST-UTILITY ANALYSIS OF ROTIGOTINE TRANSDERMAL PATCH IN EARLY-STAGE PARKINSON'S DISEASE IN SCOTLAND**

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OBJECTIVES: To evaluate the cost-effectiveness of rotigotine transdermal patch as monotherapy in early-stage Parkinson's disease (PD) compared to ropinirole and other dopamine agonists (DA) from the NHS perspective in Scotland. **METHODS:** A decision-analytic model was developed, based on treatment of an early-stage PD patient (Hoehn and Yahr-stage 2); treatment arms were rotigotine, ropinirole, and a DA practice comparator including ropinirole, cabergoline and pramipexole. 5-year and 10-year time horizons were considered for patients who remained on monotherapy only. The economic evaluation is a cost-utility analysis with health outcomes expressed in Quality Adjusted Life-years (QALY) gained in 2006. Costs relating to drug acquisition, PD severity, falls, occurrence of motor complications and other complications/adverse events/co-morbidities were considered in the model. Efficacy and safety data were estimated with a meta-analysis. Quality of life was measured using EQ-5D. Data on medical resource use was obtained via expert interviews and literature review. Costs and effects were discounted at the rate of 3.5%. **RESULTS:** After 5 years, treatment with rotigotine transdermal patch resulted in an estimated 2.30 QALYs, slightly higher than with ropinirole (2.26) and the DA practice comparator (2.27). 10-year outcomes were 3.22, 3.17 and 3.17 QALYs for rotigotine, ropinirole and DA practice comparator, respectively. Total costs for rotigotine, ropinirole and DA practice comparator were £34,748, £37,694 and £36,459 respectively after 5 years and £79,477, £84,120 and £81,631, respectively after 10 years. With a willingness-to-pay of £20,000 per QALY gained, there is a 90% probability that rotigotine is cost-effective relative to ropinirole, and a 85% probability of cost-effectiveness relative to the DA practice comparator for both 5-year and 10-year time horizons. **CONCLUSIONS:** Based on the model, rotigotine may be considered a dominant strategy over ropinirole and DA practice comparator in the treatment of early-stage PD at 5-year and 10-year time horizons.

PND29**COST-UTILITY ANALYSIS OF RIZATRIPTAN VERSUS (GENERIC) SUMATRIPTAN IN SWEDEN**Lundberg J¹, Golden WM², Insinga RP³¹MSD Sweden, Sollentuna, Sweden; ²Merck & Co., Inc., Whitehouse Station, NJ, USA;³Merck & Co., Inc., Upper Gwynedd, PA, USA

OBJECTIVES: In 2005 the Swedish pharmaceutical benefits board published a review concluding that rizatriptan 10 mg was one of the most cost-effective triptans for treating migraine, although efficacy differences among the triptan class were generally small. However, since the review, the price of sumatriptan has declined due to generic product entry. In this study, we sought to investigate the cost-effectiveness of rizatriptan versus generic sumatriptan. **METHODS:** A published Canadian decision-analytic model (Thompson et al., Pharmacoeconomics 2005) was adapted to estimate treatment costs and effects of rizatriptan 10 mg versus (generic) sumatriptan in a single migraine attack over a 24-hour time-frame in Sweden. Values modified from the published model were the substitution of Swedish health care and productivity costs, and updated data on 2-hour and 2–24 hour pain freedom (including results from more recent head-to-head trials of the comparators). As both sumatriptan 50 mg and 100 mg are marketed in Sweden, and have comparable efficacy profiles, averaged data for the two doses were used as a comparator to rizatriptan 10 mg. **RESULTS:** From a societal perspective, including both health care and productivity costs, the comparison of rizatriptan 10 mg versus (generic) sumatriptan resulted in cost-savings of ~ 5 SEK, and greater QALYs for rizatriptan 10 mg. Inclusion of health care costs only, yielded a cost-effectiveness ratio for rizatriptan vs. sumatriptan of 343,929 SEK/QALY. **CONCLUSIONS:** Given the data and assumptions used, in a single attack model, rizatriptan 10 mg was found to have a cost-effectiveness ratio compared to (generic) sumatriptan within the range typically regarded as cost-effective in Sweden. These findings suggest that there is reason to explore the cost-effectiveness of pharmaceutical and other medical interventions with large differences in acquisition cost even though efficacy differences may appear to be small.

PND30**COST-UTILITY ANALYSIS OF LACOSAMIDE ADJUNCTIVE THERAPY IN THE TREATMENT OF PARTIAL-ONSET SEIZURES IN EPILEPTIC PATIENTS IN BELGIUM**Simoons S¹, Dedeken P², De Naeyer L², Benhaddi H²¹K.U. Leuven, Leuven, Belgium; ²UCB Pharma S.A., Brussels, Belgium

OBJECTIVES: This study aims at evaluating the incremental cost-effectiveness ratio (ICER) for lacosamide compared with standard therapy alone from the perspective of the Belgian health care payer in 2010. **METHODS:** A decision tree simulating the treatment pathway of a hypothetical cohort of 1,000 patients over two years was split

into four phases of six months each during which patients can become seizure free, experience a seizure reduction (defined as ≥50% reduction in seizures), or withdraw due to non-response. The antiepileptic drugs (AEDs) included in the standard therapy arm were extracted from the pivotal trials and included carbamazepine, lamotrigine, levetiracetam, topiramate and valproate. Health state probabilities, seizure frequency and utility values were taken from lacosamide trials or from the literature. Costs of general practitioner visits, outpatient visits, hospitalizations and emergency department visits were included. Resource use was estimated by a Belgian panel of eight neurologists. Costs were discounted at a rate of 3% and consequences at a rate of 1.5%. **RESULTS:** Over a 24-month period, standard AED therapy plus lacosamide led to a reduction of 7 seizures, an increase of 0.038 quality-adjusted life-years, and a cost decrease of €3619 per patient as compared with standard therapy alone. Results were also calculated for a 6-, 12- and 18-month follow-up. Lacosamide plus AED therapy dominated versus standard therapy alone. Using a willingness to pay of €30,000 per quality-adjusted life-year, the net monetary benefit of standard antiepileptic drug therapy plus lacosamide amounted to €4,754. The probability of standard AED therapy plus lacosamide being cost-effective was 97.3% at 6 months, 99.8% at 12 months, 99.9% at 18 months, and 100% at 24 months. **CONCLUSIONS:** In epileptic patients who are difficult to treat with other AEDs, standard AED therapy plus lacosamide appears to be a cost-effective alternative.

NEUROLOGICAL DISORDERS – Patient-Reported Outcomes Studies**PND31****IMPACT OF AN ADHERENCE PROGRAM, RUN AS A TELEPHONE INTERVENTION ON COMPLIANCE WITH SUBCUTANEOUS INTERFERON β-1A FOR MULTIPLE SCLEROSIS PATIENTS USING A MAIL-ORDER PHARMACY**Papademetriou E¹, Levin R¹, Tuennermann M², Lammers V², Aubert RE¹¹Medco Health Solutions, Franklin Lakes, NJ, USA; ²Europa Apotheek Venlo B.V., Venlo, The Netherlands

OBJECTIVES: Quasi-experimental analysis to determine the effect of an opt-in telephone intervention on adherence in patients using subcutaneous interferon β-1a, which is indicated for relapsing-remitting multiple sclerosis. Drop-out reasons, side-effects, and expectations of therapy are described. **METHODS:** Customers of a mail-order pharmacy that services Germany who ordered subcutaneous interferon β-1a were targeted for enrollment in a free program that included an initial counseling call, optional e-mail reminders for the next doctor's consultation and prescription, and ongoing counseling calls. Patients enrolled in the program for at least 6-months were included in the analysis and compared to patients that did not enter the program over the same time period. Proportion of days covered (PDC) was calculated for each group and compared using analysis of variance. Enrollees in the program were administered a questionnaire at the initial welcome call addressing their expectations of therapy, and again during each counseling call regarding their compliance behavior, and side effects. **RESULTS:** Patients in the adherence program showed an unadjusted PDC 8.2% higher than the control, $F(1,247) = 13.44$, $p = 0.0003$. One program patient switched drugs compared to six control group patients, a total of 21% of enrolled subjects reported missing at least one dose. Side-effects included pain/inflammation at the site of injection (24.41%), fatigue (20.73%), headaches (17.06%), and flu-like symptoms (9.71%). Exacerbations were reported by 15.7% of patients. Patients' had expectations that therapy would prolong the distance between exacerbations (23.36%) and slow the progression of disability due to the disease (21.28%). **CONCLUSIONS:** Actively recruiting patients into an optional adherence program significantly increased the compliance rate for relapsing-remitting multiple sclerosis patients using subcutaneous interferon β-1a. Side effects experienced by enrolled patients were consistent with the package insert. Limitations include a potential bias between patients that agree to the program vs. those that do not, as well as the lack of additional questionnaire data from the control group.

PND32**INFLUENCE OF AGE ON REFILL-ADHERENCE RATES OF ANTI-EPILEPTIC DRUGS IN SOUTH AFRICA**

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OBJECTIVES: To investigate the possible influence of age on the refill-based adherence rates of anti-epileptic drugs. **METHODS:** A retrospective drug utilization review was performed on medicine claims data of a pharmacy benefit management company in South Africa. Refill-based adherence rates were calculated for 64,457 anti-epileptic drugs that were prescribed more than once during a four-year period (January 1, 2005 to December 2008). The refill-based adherence rate was calculated per trade name by using the following equation: Refill-Adherence rate = (total number of days of anti-epileptic drugs supplied—days supplied at the last refill)/(date last claimed—date first claimed). [RSA Rand (R)/\$US = 6.38112 (2005); 6.78812 (2006); 7.06926 (2007) and 8.27505 (2008)]. **RESULTS:** Only 30.5% (n = 19 635) of anti-epileptic drugs had refill-adherence rates between 90% and 110%. The majority of anti-epileptic drugs (58.9%; n = 37 962) had refill-adherence rates below 90% that accounted for 39.2% (n = R 57 599 838) of the total cost of all anti-epileptic drugs (N = R146 863 755) included in these calculations. Anti-epileptic drugs with refill-adherence rates >110% (10.7%; n = 6 860) accounted for 6.7% (R9 782 864) of the total cost of all anti-epileptic drugs. The average refill-adherence rate decreased with nearly 10% from