were used as denominators in the calculation of incremental CE ratios (ICER) are decreased frequencies of mild hypoxia, severe hypoxia and pneumonia. RESULTS: Frequencies of residual NMB were estimated as 51.2% 44.6% and 0.4% in SR, neostigmine and Bridion groups, respectively. Hypoxia rate was calculated as 27.4% and 4.4% in patients with and without residual NMB. Frequencies of pneumonia were 17.2% and 5.9% in patients with and without residual NMB. Percentage of patients without any complication was found to be 88.0% in Bridion group, while it was 73.8% and 73.7% in SR and neostigmine groups. The costs of complications were 12.6% and 114.7% in SR and neostigmine groups, while it was only 34.7% in Bridion group. When medication cost was added, the total cost rose to 114.62.

A392

Becker RV1, Dembek C2

THE IMPACT OF COHORT SELECTION ON COST-EFFECTIVENESS ANALYSIS IN ADVANCED PARKINSON’S DISEASE: A COMPARISON OF DIFFERENT COHORTS

OBJECTIVES: To conduct pharmacoeconomic evaluation of Levodopa/Carbipoda/Entacapone (LCE) compared to standard therapy in Parkinson disease in three European countries. Standard therapy was presented by Levodopa and Carbipoda. METHODS: The cost-effectiveness study was carried conducted. Effectiveness was measured in DAILY.

RESULTS: Time horizon for cost-effectiveness analysis was 2 years. A 3% discount rate was used. 1 EUR = 40 RUB. RESULTS: LCE provided benefits in effectiveness compared to standard therapy. LCE reduced days in incapacity index twice from 44 to 21 days. Two-year pilot study showed that LCE provided, 0.83 DALY, than standard therapy. LCE demonstrated lower cost-effectiveness ratio (191,492 RUB) compared to standard therapy total costs varied from 129,113 RUB (3,228 EUR) to 145,422 RUB (3,636 EUR) yearly according to disease progression grade. Indirect costs, including GDP losses due to temporary disability and payments for temporary disability, were 14,172 RUB (359 EUR) for LCE and 30,113 RUB (751 EUR) for standard therapy. The cost-effectiveness ratio for LCE was 191,492 RUB (4,787 EUR) per DALY. Shortest therapy total costs varied from 129,113 RUB (3,228 EUR) to 145,422 RUB (3,636 EUR) per DALY.

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PND24

THE IMPACT OF COHORT SELECTION ON COST-EFFECTIVENESS ANALYSIS IN MULTIPLE SCLEROSIS

Becker RV1, Dembek C2

OBJECTIVES: Adherence to cost-effectiveness analytic guidelines requires careful assessment of results to ensure that appropriate data are collected. This study examines the impact of cohort selection on the results of the Goldberg et al. 2009 cost-effectiveness study of disease-modifying therapies (DMTs) in multiple sclerosis (MS). METHODS: Using intent-to-treat (ITT) two-year data from pivotal trials, Goldberg’s model calculated cost per relapse avoided of first-line DMTs. However, there are important differences in the ITT cohorts among the trials. Due to lower than expected subject drop-out rates, the interferon beta-1a IM (INF-b-1a-IM) trial was able to meet its primary endpoint with a reduced sample size and a decision was made to terminate the trial early. This resulted in almost half of the 301 ITT (or “all-patient”) cohort being on study drug for less than two years. A second, a “two-year” 172 patient cohort consisted of patients who had completed two years on drug therapy.

Goldberg used the INF-b-1a-IM “all-patient” cohort in his cost study. To test the impact of this cohort selection, we recreated Goldberg’s model using the “all-patient” relapse rate (0.67 for INF-b-1a-IM vs. 0.82 for placebo) and then substituted the “two-year” cohort data (relapse rate of 0.61 for INF-b-1a-IM vs. 0.90 for placebo) and compared results. RESULTS: This study’s cost per relapse avoided was 45% lower for INF-b-1a-IM while the results for the other DMTs were comparable to those reported by Goldberg. Ranked from most to least cost-effective, the model results were:

- **Myelin bladder (MB)**: 59,108 (Natalizumbab) versus 70,190 (Interferon) and 87,555 (Copolymer). In Slovakia a relapse-free patient values 653,379 (Natalizumbab) versus 858,043 (Interferon) and 892,541 (Copolymer), a relapse-free patient values 510,569 (Natalizumab) versus 597,190 (Interferon) and 892,591 (Copolymer). CONCLUSIONS: Natalizumab is more cost-effective than Interferon resp. Copolymer 1 therapy. Switching to effective and more expensive alternatives does not account for higher health care costs.

PND26

MEDICO-ECONOMIC EVALUATION OF LACOSAMIDE ADJUNCTIVE THERAPY IN THE TREATMENT OF PATIENTS WITH REFRACTORY EPILEPSY IN SCOTLAND AND SPAIN

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OBJECTIVES: To calculate and compare the incremental cost-utility ratios for standard antiepileptic drug (AED) therapy with and without lacosamide in patients with uncontrolled partial-onset seizures. METHODS: The model simulated the treatment pathway of a hypothetical cohort of 1000 patients over 2 years from the perspectives of the National Health Service (NHS) in Scotland and the Spanish Healthcare System (SNS) in 2008. A decision tree was split into four phases of six months each during which patients can become seizure free, experience a seizure reduction (responder defined as a patient who is seizure free or experiencing a reduction), or withdraw due to non-response. The standard therapy arm included carbamazepine, lamotrigine, levetiracetam, topiramate, and valproate. The likelihood of being in a particular health state has been estimated from clinical data. The cost of general practitioner visits, outpatient visits, hospitalisations and emergency department visits were included. Costs and utility values attached to various health states were taken from the published literature. RESULTS: Lacosamide adjunctive therapy was associated with 6730 avoided seizures and a gain of 58 quality adjusted life-years (QALYs), compared to standard therapy arm within the two year timeframe. Treatment with lacosamide was associated with a cost of £113 and £107 per seizure avoided, and £202 and £22,771 per QALY gained versus standard therapy in Scotland and Spain, respectively. Results calculated for 6-, 12- and 18-month follow-up show a decreased incremental cost-utility ratio (utility gains of £14,097, £20,498, and £20,498 in Scotland and £21,778 in Spain. Using a willingness-to-pay threshold of £30,000 per QALY, 80% of the simulations in Scotland and 74.2% in Spain fell below this value after 2 years of treatment. CONCLUSIONS: Lacosamide was shown to be a cost-effective adjunctive treatment in patients with uncontrolled partial-onset epilepsy in Scotland and Spain.

PND7

COST UTILITY ANALYSIS OF ORPHAN DRUGS: CASE STUDY OF DUODENAL LEVODOPA INFUSION VS STANDARD TREATMENT IN PATIENTS WITH ADVANCED PARKINSON’S DISEASE IN SWEDEN

Willi M1, Gradl B1

OBJECTIVES: To evaluate the cost-utility of DLI versus standard treatment (including oral treatment and subcutaneous dopamine agonists) in patients with advanced PD in Sweden. METHODS: A stochastic Markov-based simulation model was developed. Health was described by 12 health states reflecting 4 categories of “OFF” time and 3 severity stages measured by the Hoehn and Yahr stage (HY stage). The model allows for an improvement from 0.68 to 0.70 and a cost increase from 1,410,643 (£474,108) to SEK 1,674,295 (£74,603) for DLI versus standard treatment, leading to an incremental cost-effectiveness ratio (ICER) of around SEK 420,000 (£43,800) per QALY gained. The ICER for nearly 90% of the cohorts fell below SEK 655,000 (£68,306), the willingness-to-pay threshold often cited for the quality of life of people with Parkinson’s disease.