(no CSF leak; CSF leak; death). The effectiveness outcome measure was a utility index given to each state based on the hypothesis that utility was 1 for "no CSF leak"; 0.5 for "CSF leak" and 0 for "death". **RESULTS**: When hydrogel was used, the probabilities were for no CSF leak 1.000 at T0; 0.936 at T1 and 0.876 at T2; for CSF leak 0.000 at T0; 0.043 at T1 and 0.082 at T2; and for death 0.000 at T0; 0.021 at T1 and 0.042 at T2. When no hydrogel was used, the probabilities were for no CSF leak 0.060 at T0; 0.876 at T1; 0.767 at T2; for CSF leak 0.940 at T0; 0.103 at T1 and 0.191 at T2; and for death 0.000 at T0; 0.021 at T1 and 0.042 at T2. The cost-effectiveness ratio was €4,720.20 at T0; €5,174.29 at T1 and €5,645.06 at T2 when hydrogel was used and it was €27,693.48 at T0; €14,251.71 at T1 and €12,638.00 at T2 when hydrogel was not used. The ICER, which represents the additional cost necessary to gain one additional utility unit, was €9857.12. **CONCLUSIONS**: The strategy with hydrogel was more cost-effective than the strategy without hydrogel.

PND19

COST—EFFECTIVENESS OF SUGAMMADEX IN THE MANAGEMENT OF PATIENTS WITH UNANTICIPATED DIFFICULT INTUBATION AND PATIENTS NEEDING RAPID SEQUENCE INTUBATION

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OBJECTIVES: Sugammadex (SGX) is a modified γ-cyclodextrin that has been recently marketed in Spain for the reversal of neuromuscular block induced by rocuronium (ROC) and vecuronium. The objective of this study was to evaluate the cost-effectiveness of sugammadex in the management of patients with unanticipated difficult intubation and patients needing rapid sequence intubation from the Spanish National Health System perspective. **METHODS**: Two decision-analytic models were developed to assess the average per patient treatment costs (€2009), life-years gained, and incremental cost per life-year gained of ROC + SGX vs. succinylcholine in patients needing rapid sequence intubation and ROC +SGX vs. all other neuromuscular blocking agents in the management of the unanticipated difficult intubation patients. The models simulate the probability of not being able to intubate, the probability of experiencing an adverse effect, and the direct costs produced by each treatment alternative. Clinical data was obtained from the SmPC of each drug and form secondary sources. Costs were obtained for Soikos database. All data was validated by a focus group in order to adapt the model to the Spanish clinical practice. **RESULTS**: In the management of unanticipated difficult intubation patients, ROC+SGX is associated with higher life years gained and less costs than the intubation with atracurium or cisatracurium and with a mean cost per life year gained (LYG) of €11,077 vs. succinylcholine based regimens. In the rapid sequence intubation model, ROC+SGX is associated with mean expected costs of €58.11 and mean expected life years of 20.38, and succinylcholine with €57.89 and 20,37, meaning a cost per LYG of ROC+SGX vs succinylcholine of €3106. **CONCLUSIONS**: Under the established assumptions, sugammadex would be a cost-effective alternative for the reversal of patients with unanticipated difficult intubation or for the management of patients undergoing rapid sequence intubation.

PND20

REVERSAL OF NEUROMUSCULAR BLOCKADE WITH SUGAMMADEX—COST-EFFECTIVENESS ANALYSIS

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OBJECTIVES: To assess the cost-effectiveness of sugammadex for reversal of neuromuscular blockade (NMB) in Portuguese hospitals, using a clinical decision model. **METHODS**: We compared sugammadex 2.0 mg/kg with neostigmine 50 μg/kg plus atropine 0.375 mg. Clinical efficacy and safety data were obtained from both published literature and phase III randomized clinical trial supporting the need for routine reversal of rocuronium or vecuronium NMB. Clinical events considered were drug adverse reactions and post-operative residual curarization. Risk of death within hospitalization, duration and cost of hospitalization were estimated from hospitalizations in Portuguese public hospitals during 2007, with at least one surgical procedure. Only direct costs were considered (drugs, medical visits, side effect treatments and monitoring). Effectiveness was measured in life years (LY). Premature death accounted to LY as the loss of remaining lifespan. Monte Carlo simulations were used to assess second-order uncertainty. **RESULTS**: NMB reversal with sugammadex was estimated to result in a per patient gain of 2.25 LY (95%CI [1.78; 2.74]) and a decrease of €1509 (95%CI [-6,148; 738]) on total cost when compared to the neostigmine-atropine alternative, being on average a dominant strategy. Probabilistic sensitivity analysis revealed 82.6% probability of sugammadex dominance and 100% of being cost-effective at a threshold of €1000. **CONCLUSIONS**: Neuromuscular blockade reversal with sugammadex may be considered a cost-effective strategy in comparison to neostigmine-atropine.

PND21

COST-EFFECTIVENESS OF RASAGILINE COMPARED TO OTHER FIRST LINE TREATMENT OPTIONS OF EARLY PARKINSON'S DISEASE IN THE UNITED STATES

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OBJECTIVES: We examined whether rasagiline, a once-daily irreversible monoamine oxidase type-B inhibitor indicated for treatment of early Parkinson's disease, is a cost-effective first-line treatment strategy when compared with ropinirole XL, pramipexole, generic ropinirole, and first-line levodopa. **METHODS**: We developed a 5-year Markov model to examine the cost-effectiveness of initiating early treatment of PD with rasagiline from a United States payer perspective. Comparator strategies included initiating therapy with ropinirole XL, pramipexole, generic ropinirole, or levodopa. Rasagiline was followed by either a dopamine agonist (DA) or levodopa. DA was followed by levodopa. Patients on a DA or levodopa could develop dyskinesias. Health state transitions occurred every 6 months. Transition probabilities were from clinical trial data. Drug costs, medical costs and utility weights were from published sources. One-way and probabilistic sensitivity analyses were performed. Costs and outcomes were discounted at 3% per year. **RESULTS**: Over 5 years, first-line treatment with rasagiline was cost saving and more effective when compared to branded DAs and levodopa. Rasagiline was cost-effective versus generic ropinirole at $1,838 per quality-adjusted life-year (QALY): incremental costs +$239 and incremental QALYs +0.13. After five years compared to a DA, 23% and 50% fewer patients who initiated treatment with rasagiline were taking levodopa and experiencing dyskinesias respectively. Compared to first-line levodopa, 52% and 69% fewer patients starting rasagiline were taking levodopa and experiencing dyskinesias respectively. **CONCLUSIONS**: Initiating early Parkinson's disease therapy with rasagiline delayed treatment with levodopa, reduced dyskinesias, and appears to be cost-savings or cost-effective when compared to initiating therapy with other first-line therapies.

PND22

COST-EFFECTIVENESS OF DONEPEZIL IN ALZHEIMER'S DISEASE IN SWEDEN

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OBJECTIVES: The societal costs of caring for patients with Alzheimer's disease (AD) are substantial. In light of increasing AD prevalence, there is a need for efficient allocation of available resources and despite few therapeutic alternatives the cost-effectiveness of treatment with cholinesterase inhibitors has been the issue of much debate. The objective of this study was to use recently collected data on costs and utilities at different stages of AD to estimate the cost-effectiveness of donepezil compared to placebo in mild-to-moderate AD in Sweden. **METHODS**: A twelve state Markov-model was developed, incorporating cognitive function (mild/moderate/severe), ADL-dependency (independent/dependent) and care setting (home/institution). Data on efficacy and disease progression were based on a 1-year clinical trial in Northern Europe and costs and utilities were based on a recently conducted cost-of-illness study in Sweden. The cohort was simulated over five years in 6-month cycles. Patients were assumed to receive treatment during one year, and after that disease progression rates were assumed to be identical in the donepezil and the placebo group. **RESULTS**: In base case scenario, the treatment cost of donepezil (11,023 SEK) was offset by lower other costs of care (17,618 SEK), resulting in an overall cost-saving of 6595 SEK per patient compared to placebo. Donepezil treatment also delayed progression into severe AD, ADL-dependence and institutionalization and led to a gain of 0.056 quality-adjusted life-years (QALY). Sensitivity analyses were carried to analyze the impact of extending the period under which treatment costs were incurred and by altering the baseline characteristics. Donepezil was cost-saving in most of these alternative scenarios and cost-effective in all of them. **CONCLUSIONS**: Using new data on costs and utilities in AD, donepezil treatment in mild-to-moderate AD is cost-saving compared to placebo. Treatment delays progression into severe AD, ADL-dependence and institutionalization and thereby leads to QALY gains.

PND23

HEALTH ECONOMIC EVALUATION OF LAMOTRIGINE VERSUS LEVETIRACETAME IN THE INITIAL MONOTHERAPY OF EPILEPSY (LALIMO-TRIAL)

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OBJECTIVES: Health economic evaluation on the relative value of lamotrigine (LTG) and levetiracetame (LEV) in the initial monotherapy of epilepsy **METHODS**: Paralleling an open label, prospective, randomised, multicenter trial including 409 epilepsy patients, a health economic evaluation of 81 participants aged ≥18 years was conducted. Data collection was done by the CRF of the clinical trial and in a series of three telephone interviews (baseline and two follow up calls, 3 and 6 months after baseline, respectively). The telephone interviews comprised sociodemographics, as well as instruments for the evaluation of health-related quality of life, depression and resource use). **RESULTS**: Eighty-one epilepsy patients were included in the economic evaluation. Thirty-eight (46.9%) patients were female: 21 (53.8%) in the LTG arm and 17 (40.5%) in the LEV arm. The mean duration of the disease was 2.0 ± 3.9 years (LTG) and 2.2 ± 6.1 years (LEV). Over the survey period, there was no significant difference concerning the number of ambulatory consultations (LTG 28 vs. LEV 26) or stationary hospital care (LTG 33 vs. LEV 38), though there was a trend for more