The cost-effectiveness analysis of pregabalin in the treatment of central neuropathic pain

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OBJECTIVES: To evaluate the cost effectiveness of pregabalin compared to placebo in the treatment of central neuropathic pain (CNP) from the perspective of the public healthcare payer in the Czech Republic. METHODS: A de novo microsimulation model was developed in MS Excel containing pregabalin treatment of CNP versus placebo as there is no other treatment of CNP available and reimbursed in the Czech Republic. The improvement of patients’ pain intensity expressed as the decrease in VAS (Visual Analog Scale (0-100) score) was modelled during the 2 week time horizon. The changes of VAS score were calculated for each intervention using a regression functions of time and the baseline VAS score. Utilities were assigned to each VAS score according to the regression equations expressed for each utility value. RESULTS: A model structure created by NICE to inform guideline development in neuropathic pain. The structure was replicated as R code for ease of exposition. Costs were updated to reflect 2014 prices. The exploratory analysis considered a hypothetical drug “Product X” versus pregabalin. The percentage premium over the price of pregabalin that would result in an ICER at the NICE threshold of £20,000 when varying efficacy parameters. RESULTS: A 30% improvement over pregabalin in the proportion of patients achieving a 30% reduction in pain could justify a price premium of 39%, whilst a 30% improvement in the proportion of patients achieving >50% improvement could justify a premium of 70%. If “Product X” provides no analgesic improvement but causes 40% fewer adverse events and related hospital admissions, a premium of 27% could be justified. CONCLUSIONS: The analyses presented highlight how this transparant model can be used as a tool for identifying parameters of importance in the early economic evaluation of new therapies. The developed analyses are made readily available and we welcome the ISPOR community to use, adapt and provide comments on how to refine and improve this model for future use.

PSY64 COST-EFFECTIVENESS ANALYSIS OF PREGABALIN IN THE TREATMENT OF CENTRAL NEUROPATHIC PAIN

A670 VALUE IN HEALTH 18 (2015) A335–A766 nunnings in most scenarios, the variation of IFX vial and ADA syringe costs are important factors that should modify the sensitivity analysis. CONCLUSIONS: The treatment of Crohn's disease with ADA compared to IFX presented an economic savings for nearly 68% of patients with Crohn's Disease in the Brazilian Private HealthCare System.

PSY65 COST-EFFECTIVENESS MODELLING FOR NEUROPATHIC PAIN TREATMENTS: AN EXPLORATION TO IDENTIFY COMPARATIVE IMPORTANCE OF MODEL PARAMETERS

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OBJECTIVES: To use a cost-effectiveness microsimulation model to analyse the direct and indirect costs and effectiveness of different biologicals for treating moderate-to-severe neuropathic pain. Parameters that could modify the sensitivity analysis were identified. RESULTS: The most influential parameters were the frequency of injection for the biologicals, the duration of effectiveness of the biologicals and the cost of injection. CONCLUSIONS: The sensitivity analysis of the model can be used to show which parameters affect the cost effectiveness of the various biologicals for treating moderate-to-severe neuropathic pain.

PSY66 COST-EFFECTIVENESS OF USTEKINUMAB IN THE TREATMENT OF PSORIASIS IN FINLAND

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OBJECTIVES: To evaluate the cost-effectiveness of ustekinumab in the treatment of psoriasis in the Finnish setting. METHODS: A sequential Markov cohort model was used to determine the cost-effectiveness of ustekinumab. Application costs were included. A state was used to reflect whether the patient was eligible for ustekinumab treatment, with ongoing treatment. Patients on ustekinumab who did not achieve PASI 75 response were modelled to receive a placebo, but they were allowed to re-enter the ustekinumab state if they were eligible for the treatment. To determine the costs, a cost-minimization analysis was performed. RESULTS: The incremental cost-effectiveness ratio (ICER) of ustekinumab was €454,835 per quality-adjusted life-year (QALY) gained. The cost of ustekinumab was €9,130.63 per treatment cycle. The cost of systemic therapies was €3,788.05. The mean QALYs for ustekinumab and systemic therapy were 3.895 and 3.825. Thus, the current care using ustekinumab extended the life expectancy of patients with psoriasis by 4.87 years compared to the systemic therapy. CONCLUSIONS: Ustekinumab was cost-effective compared to systemic therapies. The incremental cost-effectiveness ratio of ustekinumab was estimated to be €454,835 per QALY gained.