outcomes and costs was not conducted because the time horizon of the analysis did not exceed the patients' life expectancy. Sensitivity analysis was conducted using 50% of post-market efficacy. The Markov and DES models produced similar results, both concluding that fingolimod was cost-effective compared to onabotulinumtoxin-A in the Australian healthcare system. Results held under sensitivity analysis of fewer number of weeks with symptoms compared to onabotulinumtoxin-A and incobotulinumtoxin-A according to patient needs resulted in patients experiencing fewer number of weekly workdays lost due to MS and onabotulinumtoxin-A administration at fixed 12-week intervals. The Markov model consisted of three health states and followed patients in weekly cycles for one year. Only direct healthcare costs associated with the acquisition and administration of BotNT/A were included. Utility values were derived from a time-trade-off valuation using a single dimension (utility values were the incremental cost per quality-adjusted life year (QALY). Univariate and multivariate sensitivity analyses were conducted. RESULTS: Incobotulinumtoxin-A dominated onabotulinumtoxin-A in both BLEPH and CD. The option to administer incobotulinumtoxin-A according to patient needs resulted in patients experiencing fewer number of weeks with symptoms compared to onabotulinumtoxin-A administration at fixed 12 week intervals. Incobotulinumtoxin-A provided cost savings to the Australian healthcare system. Results held under sensitivity analyses. CONCLUSIONS: Incobotulinumtoxin-A administered at flexible treatment intervals, determined by patient needs, represents a more cost-effective treatment option when compared with onabotulinumtoxin-A in the Australian healthcare system.

**PND61**

**COST-UTILITY OF FINGOLIMOD COMPARED WITH DIMETHYL FUMARATE (DMF) IN HIGHLY ACTIVE RELAPSING REMITTING MULTIPLE SCLEROSIS (RRMS) IN ENGLAND: COMPARISON OF A MARKOV AND A DISCRETE EVENT SIMULATION MODEL**

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OBJECTIVES: A cohort Markov model based on disability scores was originally constructed to: 1) test the robustness of a Markov model structure and to test structural uncertainty, a discrete event simulation (DES), based on time to event, was subsequently developed. METHODS: The same inputs were used in both models, except that in the DES the cohort of individual patients that reflected the patients from the main fingolimod trials was used and risks of some events were linked to baseline characteristics. For both models, published post hoc clinical data in the HA RMMS subgroup were taken from the pivotal trials for fingolimod and DMF vs placebo. Utility data for all health state and for relapses were used in line with previous similar models. Published costs were inflated to NHS cost year 2013-14 and UK list prices used for both drugs. Possible Patient Access Scheme (PAS) discount scenarios were investigated. RESULTS: In the base case, using list prices, the average probabilistic incremental cost-effectiveness ratio (ICER) for fingolimod vs DMF was found to be £14,076 per QALY. Results were presented. CONCLUSIONS: The objective was to make the DES in this situation. DES has greater potential than the Markov model to be easily adapted in the future to deal with changing assumptions on long-term efficacy, treatment sequences and chronic adverse events.

**PND62**

**DIFFERENCES IN WORK PRODUCTIVITY IMPAIRMENT IN RRMS PATIENTS INITIATED ON ORAL DMF OR PLATFORM THERAPIES IN EUROPE AND US**

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BACKGROUND: Multiple sclerosis (MS) is a chronic and debilitating disease of the central nervous system that affects approximately 570,000 people in the United States and 2.3 million worldwide. As most individuals with this condition between the ages of 20 and 40 years, MS can have a significant impact on health-care consumption, productivity and employment. OBJECTIVES: To compare the workforce productivity and activity impairment of a 52-week open-label study of oral dimethyl fumarate (DMF, also known as gastro-resistant DMF) and prior approved interferon β-1a/b or glatiramer acetate (ABCRES) therapies. METHODS: Data were identified from the Adelphi MS Disease-Specific Programme, a 52-week open-label study of MS patients in five EU countries and US. Relapsing Remitting MS (RRMS) patients were identified, receiving DMF or ABCRES therapies with treatment duration greater than 12 months. Reverse-probability-weighted regression-adjustment estimated average annual productivity effects (ATE) at DMF and ABCRES cohorts, utilising a composite score generated from age, gender, EDSS score at current treatment initiation, BMI, duration of current treatment, line of therapy, time since MS diagnosis, and number of comorbid conditions. Work productivity and daily activity impairment due to MS, as measured by the Work Productivity and Activity Impairment (WPAI-MS) questionnaire, were compared across treatment arms. RESULTS: Work productivity and activity impairment data was available for 160 and 243 patients, respectively. Overall productivity impairment, increased with MS severity (mild: OR = 1.51; moderate: OR = 1.28; severe: OR = 17.39; p < 0.001) and higher w. In the DMF cohort (ATE = −13.92%, p < 0.001 vs. 20.9%). Similarly, impairment while working (presenteeism) due to MS was significantly lower in the DMF cohort (ATE = −12.97%, p < 0.001, vs. 19.45%). No percent of work missed (absenteeism) was observed in the DMF cohort (ATE = −2.06%, p < 0.012 vs. 2.06%). Daily activity impairment was significantly lower in the DMF cohort (ATE = −17.26%, p < 0.001, vs. 25.31). CONCLUSIONS: Compared with ABCRES patients, patients on DMF had a significantly lower work productivity loss as measured by WPAI-MS.