outcomes and costs was not conducted because the time horizon of the analysis did not exceed 1 year. Bivariate sensitivity analysis (SA) was performed. **RESULTS:** The cost of the 1st year therapy of compared drugs was: 28,822, 20,810, 57,449 and 54,332 rubles for piribedil CR, pramipexole ER, ropinirole ER and rasagiline respectively. Total therapy cost was estimated by summarizing the cost of therapy and ADR costs. Total costs for comparator drugs constituted: 28,930, 21,009, 57,576 and 54,381 rubles for piribedil CR, pramipexole ER, ropinirole ER and rasagiline respectively. Utility effect of the comparison drugs was: -6.1, -8.2, -0.3, -2.7 for piribedil CR, pramipexole ER, ropinirole ER and rasagiline respectively. In the analysis was found that pramipexole ER has the lowest cost-utility ratio (CUR) – 2,562 rubles for 1 point reduction of daytime activity disruption and severity of motor impairment as indicated by UPDRS scale. **CONCLUSIONS:** Pramipexole ER has the lowest CUR. SA confirmed these results. Pramipexole ER was the dominant strategy for PD treatment demonstrating higher utility rate at lower costs.

PND60
COST-EFFECTIVENESS OF INCOBOTULINUMTOXIN-A WITH FLEXIBLE TREATMENT INTERVALS COMPARED TO ONABOTULINUMTOXIN-A IN THE MANAGEMENT OF BLEPHAROSPASM AND CERVICAL DYSTONIA

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OBJECTIVES: Incobotulinumtoxin-A is a formulation of botulinum neurotoxin type A (BoNT/A) that is free of complexing proteins. The advantages of incobotulinumtoxin-A include flexible treatment intervals determined by clinical need. The objective of this study was to assess the cost-effectiveness of incobotulinumtoxin-A administered with flexible treatment intervals compared to onabotulinumtoxin-A in blepharospasm (BLEPH) and cervical dystonia (CD) from the Australian healthcare providers' perspective. **METHODS:** A Markov state transition model was developed to perform a cost-utility analysis (CUA) comparing the cost and health benefits of incobotulinumtoxin-A with onabotulinumtoxin-A. The CUA compared incobotulinumtoxin-A treatment, given at minimum intervals of 6 weeks and maximum intervals of 20 weeks, with onabotulinumtoxin-A treatment given 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 BoNT/A's were included. Utility values were derived from a prospective, open-labelled cohort study. The primary outcome measure was the incremental cost per quality-adjusted life year (QALY). Univariate and probabilistic 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 administered 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 DISCRETE EVENT SIMULATION MODEL

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OBJECTIVES: A cohort Markov model based on disability scores was originally constructed. Due to constraints of a Markov 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 a 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 RRMS subgroup were taken from the pivotal trials for fingolimod and DMF vs placebo. Utility data for each 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 using the Markov model (incremental cost: £10,358, QALYs: 0.74) and £11,449 per QALY using the DES (incremental cost: £8,694, QALYs: 0.76), with a 73% and 72% chance of fingolimod being cost-effective at a willingness-to-pay threshold of £30,000/QALY, respectively. Both models were most sensitive to treatment effect on disability progression, but robust to other changes including incorporation of a wide range of PAS estimates. **CONCLUSIONS:** The Markov and DES models produced similar results, both concluding that fingolimod remains cost-effective in HA RRMS following the introduction of DMF to the UK market. This validates the use of a 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 ACTIVITY IMPARMENT 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 persons in the United States and 2.3 million worldwide. As most individuals experience initial symptoms between the ages of 20 and 40 years, MS can have a significant impact on healthcare consumption, productivity and employment. **OBJECTIVES:** To compare the work productivity impairment in patients initiated on delayed-release dimethyl fumarate (DMF; also known as gastro-resistant DMF) and prior approved interferon β-1a/b or glatiramer acetate (ABCRE) therapies. **METHODS:** Data were identified from the Adelphi MS Disease Specific Programme, a cross-sectional study of MS patients in five EU countries and US. Relapsing Remitting MS (RRMS) patients were identified, receiving DMF or ABCRE therapies with treatment duration greater than 12 months. Inverse-probability-weighted regression-adjustment estimated average treatment effects (ATEs) across DMF and ABCRE cohorts, utilizing a propensity 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 work impairment due to MS was significantly lower in the DMF cohort (ATE=-13.92%, p<0.001, vs. 20.92%). 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 ABCRE patients, patients on DMF had a significantly lower work productivity loss as measured by WPAI-MS.

PND63
THE IMPACT OF INCREASING MULTIPLE SCLEROSIS (MS) SEVERITY LEVEL ON EMPLOYMENT AND CAREGIVER BURDEN

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OBJECTIVES: MS is a chronic disease associated with substantial clinical and socioeconomic burden. MS patients experience increasing levels of disability as their disease progresses. This study investigates the association between increasing MS severity and its impact on relapsing-remitting (RRMS) and secondary progressive (SPMS) MS patients. **METHODS:** Data were drawn from the Adelphi MS Disease Specific Programme, a global (France, Germany, Italy, Spain, UK, USA) cross-sectional study with 2965 RRMS and 494 SPMS patients. Multiple logistic, linear and partial proportional odds regressions determined the association between physician-reported MS severity ('very mild' [RRMS only], 'mild', 'moderate', 'severe') and presence of an informal caregiver, weekly informal caregiver hours, and employment status, respectively. Regressions adjusted for age, gender, BMI and number of concomitant conditions. Reference category was 'very mild' and 'mild' for RRMS and SPMS, respectively. **RESULTS:** For RRMS patients, the likelihood of part-time employment or unemployment, increased with MS severity (mild: OR = 1.51; moderate: OR = 3.28; severe: OR =17.39; p<0.001 for all) and (mild: OR = 1.18, p=0.143; moderate: OR = 2.45, p<0.001; severe: OR = 8.53, p<0.001), respectively. Similar results were observed in SPMS patients (moderate: OR = 3.41, p=0.002; severe: OR =16.85, p<0.001) and (moderate: OR = 3.41, p=0.002; severe: OR = 16.85, p<0.001). Increasing level of severity was associated with a higher likelihood of informal care (RRMS: mild: OR = 1.60, p=0.040; moderate: OR = 4.27, p<0.001; severe: OR =15.31, p<0.001; SPMS: moderate: OR = 6.70, p<0.001; severe: OR =14.93, p<0.001) and higher weekly informal caregiver hours (RRMS: mild: +0.97, p=0.014; moderate: +4.52, p<0.001; severe: +13.27, p<0.001; SPMS: moderate: +8.45, p=0.006; severe: +18.81, p<0.001). **CONCLUSIONS:** Increased MS severity is associated with significantly lower employment as well as increased caregiver burden. MS patients should start effective treatments early to delay disease progression.

PND64
COMPARING RESOURCE USE IN ALZHEIMER'S DISEASE ACROSS THREE EUROPEAN COUNTRIES - 18-MONTH RESULTS OF THE GERAS STUDY

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OBJECTIVES: To compare resource utilization drivers of societal costs for Alzheimer's disease (AD) over 18-months in three countries participating in an observational study. **METHODS:** GERAS is a prospective, multi-centre, non-interventional cohort study in France (n=419), Germany (n=550) and the UK (n=526). Resource use of AD patients and caregivers (including informal caregiving time and institutionalization), contributing to >1% total societal costs (comprising patient health and social care costs and informal caregiver costs - based on 2010 prices) were identified and assessed for country differences using Generalised Linear Models of repeated measures or Cox models, adjusting for key patient and caregiver characteristics. **RESULTS:** 18-month societal costs per patient: France €33,300, Germany €38,200 and UK €37,900. Caregiver time spent assisting patient with basic and instrumental activities of daily living (ADL) made the largest contribution to total societal costs in each country (55-69%). Caregivers in France spent less time on basic and instrumental ADLs and were less likely to miss work. Patients in France used more community care services and were more likely to spend time in respite care, whereas German patients were less likely to use respite care and had slower time to institutionalization (Hazard Ratio 0.59 (95% CI 0.41-0.84) Germany, 0.84 (0.60-1.18) France, reference UK; p-value 0.0143). UK caregivers spent more time on instrumental ADLs while patients used fewer outpatient resources but were more likely to receive financial support. No country differences in hospital stays or use of AD medication were seen. **CONCLUSIONS:** Caregiver time was consistently the