OBJECTIVES: To assess the effects of early psychosocial intervention on delaying the institutionalization of patients with mild or early Alzheimer’s disease (AD) and on their carers’ health-related quality of life (HRQOL). METHODS: Totally, 240 patient-caregiver dyads were recruited to a pragmatic, controlled, and randomized (1:2) clinical trial in 3 hospital districts in Finland between 2002-2006. A primary outcome measure was the time before transfer to functionally dependent care due to AD and on secondary outcomes: caregivers’ global burden (measured by Global Health Questionnaire GHQ) and HRQOL measured by the 15D. The secondary outcomes were analyzed using generalized linear mixed models (GLMM) with hierarchical structure to account for repeated measures and possible clustering by the hospital district. RESULTS: After 36 months of follow-up, competing risk adjusted incidence of institutionalization rates (95% CI) were 21.2% (25.9% - 29.9%) and 16.1% (10.3% - 21.9%) in the intervention and usual care conditions respectively. Age and gender were the most predictive covariates (HRs accounted for treatment effects) and the London Ontario cohort (SPMS and RRMS–SPMS transitions). To estimate the comparative efficacy of oral therapies (follow-up cohort included patients from 12 centers in 9 countries, ranging from 5.6% to 64.5% of new comers), 4 therapeutic groups (HRs accounted for treatment effects) and the London Ontario cohort (SPMS and RRMS–SPMS transitions). RESULTS: Compared to colistin-P, TIP is expected to have similar effects on CDP at week 4 respectively -1.97 (95% Credible Interval -11.84, 8.03), -2.38 (-12.71, 7.98), and -1.53 (-0.75 , 2.52). No statistical significant differences in the secondary outcomes were found. CONCLUSIONS: The early psychosocial intervention for patients with mild AD and their caregivers did not delay time to nursing home placement. The results of the present study are consistent with a recently published study (Waldorff et al. 2012 BMJ) reporting no effect of semi-tailored intervention for patients with mild AD and their caregivers. Even if the present study did not manage to show differences between the study groups, it provides the valuable longitudinal data for studying long-term disease progression (in terms of correlated cognitive, behavioral, and functional disabilities) and its economic and quality of life consequences for patients with AD and their caregivers.

PND6 MODELING THE IMPACT OF DISEASE MODIFYING TREATMENT ON TIME TO DISABILITY HEALTH STATES IN Pooled 6-Month FREEDOMS trails of Oral Therapies through Indirect Comparisons of 6-Month Confirmed Disability Progression Bergsneider J1,2,3,4,5, Khawaja N1,2,3,4,5, Pizzuti E1,2,3,4,5, Filippini G1,2,3,4,5, Benavides-Macias J1,2,3,4,5, Felder E1,2,3,4,5, Grassi L1,2,3,4,5, Balasubramanian R1,2,3,4,5, Greenberg DA1,2,3,4,5, Faden H1,2,3,4,5, Dematteo F1,2,3,4,5, Triggle DJ1,2,3,4,5, Barohn R1,2,3,4,5, Whitehead S1,2,3,4,5,註1Novartis Pharma AG, Basel, Switzerland, 注2Novartis Healthcare Pvt. Ltd., Hyderabad, India, 注3McBiotics Unit, Cambridge, UK, 注4Numerator Ltd., Wokingham, UK

OBJECTIVES: To estimate the comparative efficacy of oral therapies (follow-up cohort included patients from 12 centers in 9 countries, ranging from 5.6% to 64.5% of new comers), 4 therapeutic groups (HRs accounted for treatment effects) and the London Ontario cohort (SPMS and RRMS–SPMS transitions). METHODS: Cox proportional hazards regression models were used to analyse 6-month confirmed disability progression (CDP), based on Expanded Disability Status Scale (EDSS) scores, in the pooled fingolimod FREEDOMS trials. Initial models were constructed with eight baseline covariates as main and treatment-interaction effects and final models with the most predictive covariates were selected using a stepwise algorithm. Models predicted CDP rates for 6-month fingolimod 0.5mg average daily dose (ADD) for average TMSO (terifilumide trial) and pooled DEFINE/CONFIRM (DMF trials) patients. Time from EDSS score 0 to scores 4 or 6 and to conversion to secondary progressive multiple sclerosis (SPMS) were estimated by fitting a multi-state Markov Transition model to individual patient data from the pooled FREEDOMS placebo groups (HRs accounted for treatment effects) and the London Ontario cohort (SPMS and RRMS–SPMS transitions). RESULTS: Without covariate adjustment, the HR for CDP for TIP versus placebo in the pooled FREEDOMS trials was numerically lower (i.e. fingolimod more efficacious) than that for DMF twice daily versus placebo (0.57 versus 0.77). In a model including baseline factors that were significantly reported. During lacosamide administration, a decrease in concomitant mod increased times to disability health states. CONCLUSIONS: Fingolimod is the most efficacious treatment with Chro-.
days, respectively. By frequency of outpatient appointments a combined generic drug fee (amount per visit at the Health Service price $ 5.1), and outpatient cavitation (19 appointment per visit $ 17.27) were used often. CONCLUSIONS: In Ukraine, outpatient cerebroprotective drugs consumption is greater than their consumption in hospital due to the lack of prescriptions control.

PND11

**UTILIZATION OF ANTI SPASTICITY DRUGS IN MULTIPLE SCLEROSIS: ANALYSIS FROM AN ITALIAN MEDICARE DATABASE TO ESTIMATE THE PREVALENCERO AND INCIDENCE OF PARKINSON’S DISEASE IN FRANCE**

**OBJECTIVES:** Spasticity is a common condition among patients with progressive and/or relapsing forms of multiple sclerosis (MS). Current therapies seem to partially improve spasticity symptoms. Sensitivity analyses showed that the use of current treatments or switch to new treatments to achieve a better control. The objective of this analysis was to assess the current usage of spasticity drugs and relative patterns of utilization among patients with MS, through administrative database analysis. Patients who, during the period January 2000 – December 2009, had at least one disease modifying agent (DMA) prescription Then the usage of drugs commonly used in spasticity (muscle relaxant drugs, baclofen, tizanidine, clonidine, dantrolene) was evaluated in this cohort of patients, in terms of number of subjects receiving at least one prescription, and number of DDD (defined daily doses) per patient per year. RESULTS: From 2000 to 2009, the annual number of patients with MS receiving a DMA (baclofen, tizanidine, clonidine) raised from 10,862 to 15,633. Concomitantly, the annual number of patients receiving at least one muscle relaxant prescription raised from 5.87% (n=631) to 9.42% (n=1,186). The most prescribed drug was baclofen with few patients receiving other drugs commonly indicated in spasticity (dantrolene, tizanidine and clonidine). A relevant number of patients using muscle relaxants also received other drugs for the central nervous system, although its usage achieved a peak in 2005 (8% of MS patients). The analysis of DDD per patient/year suggested that the usage of muscle relaxant might be almost chronic in these patients (in 2009, 303 DDD per patient per year). CONCLUSIONS: Only 10% of patients with MS currently receive active pharmacological treatment, although this condition seems to be affecting more than 20% of MS patients in Europe. Also, there are not relevant alternatives or second line options to baclofen, which is the most commonly prescribed drug in this condition.

PND12

**USE OF THE FRENCH CLAIMS DATABASE TO ESTIMATE THE PREVALENCE AND INCIDENCE OF PARKINSON’S DISEASE IN FRANCE**

**OBJECTIVES:** Few studies have assessed the prevalence and incidence of Parkinson’s disease (PD) in France. The objectives of this study were to estimate the prevalence and incidence of PD in France using data from 2009 and 2010 using the French national databases. METHODS: The EGB database is a 1/97 permanent random sample of the French health care insurance system database linked to the national hospital discharge data for hospital care. Data for all patients have full insurance coverage for PD, or hospitalised with main, related, or associated PD diagnosis, or with at least 3 antiparkinsonian agent reimbursements over a one-year period were extracted for the years 2009 and 2010. A specific and a sensitive PD criterion were defined: i) patients with a medical diagnosis of PD from full insurance coverage or hospitalisation, ii) same patients plus those without a full medical diagnosis in the database but a drug prescription compatible with this diagnosis (a second set of at least 3 antiparkinsonian or other one another antiparkinsonian or no co-related medical diagnosis with extrapyramidal side effects, as well as no antiparkinsonian agent pattern specific of another indication)). EGB estimations were applied to the French population with age and gender standardization to estimate the prevalence and incidence in France. RESULTS: Prevalence of PD increased from 0.27% in 2005 to 0.33% in 2010 using the specific definition of disease, and from 0.38% to 0.46% using the sensitive definition. The incidence rate per year was 0.03-0.04% using the specific definition. The incidence rate per year was 0.03-0.04% using the specific definition of disease; results are consistent with that reported internationally.

**NEUROLOGICAL DISORDERS – Cost Studies**

PND13

**BUDGET IMPACT ANALYSIS OF BOTULINUM TOXIN A THERAPY FOR UPPER LIMB SPASTICITY IN THE UNITED KINGDOM**

**OBJECTIVES:** Upper limb spasticity (ULS) secondary to upper motor neuron lesions is a disabling condition and currently there is no curative treatment. This analysis examines the cost-effectiveness of botulinum toxin A (BoNT-A) injections for the treatment of ULS. We developed a budget impact model (BIM) to assess the different BoNT-A treatments available in the UK for reducing ULS. We also assessed annual costs of treating each UL patient with BoNT-A or best supportive care (BSC). METHODS: The BIM was developed from the UK perspective. Health service costs were included. The cost of BoNT-A, other health care costs and the associated costs. The status quo scenario assumed the three BoNT-A, Dysport® (abobotulinumtoxin-A), Botox® (onabotulinumtoxinA), or Xeomin® (incobotulinumtoxinA), are used in 33%, 52% and 15%, respectively, of patients with ULS receiving BoNT-A in the UK. The new market share was estimated by using a representative sample of ULS patients. Resource-use inputs were obtained from UK clinicians. One-way sensitivity analyses for model inputs were conducted. RESULTS: Total cost were decreased by between £245,765, in year 1; £854,601, in year 5 by shifting market share to abobotulinumtoxinA. The base-case scenario, BSC (no BoNT-A treatment) or with incobotulinumtoxinA or onabotulinumtoxinA cost more per patient per year than abobotulinumtoxinA. Sensitivity analyses showed that the observed difference between the BoNT-A treatments were the most influential parameters on budget impact, impacting both drug acquisition costs and physician visits. CONCLUSIONS: Study results suggest that the introduction of abobotulinumtoxinA and onabotulinumtoxinA for ULS in the UK could potentially reduce total treatment costs.

PND14

**THE BUDGET IMPACT OF INTRODUCING BG-12 (DIMETHYL FUMARATE) FOR TREATMENT OF RELAPSE-REMITTING MULTIPLE SCLEROSIS (RRMS) IN CANADA**

**OBJECTIVES:** Multiple sclerosis causes significant disability and mortality globally and is found across Europe, the Americas, and Australia. RRMS is currently on the market in the United States and Canada and under review in Europe. Few studies have assessed the prevalence of RRMS. EGB estimations were applied to the French population with extrapyramidal side effects, as well as no antiparkinson agent pattern specific of another indication). EGB estimations were applied to the French population with age and gender standardization to estimate the prevalence and incidence in France. RESULTS: Prevalence of RRMS increased from 0.27% in 2005 to 0.33% in 2010 using the specific definition of disease; results are consistent with that reported internationally.

**NEUROLOGICAL DISORDERS – Cost Studies**

PND15

**BUDGET IMPACT OF EVEROLIMUS FOR TUBEROUS SCLEROSIS COMPLEX (TSC) RELATED ANGIOIYMOLIPOMA (AML): UNITED KINGDOM PERSPECTIVE**

**OBJECTIVES:** AMLs are benign tumors common in patients with TSC, associated with high morbidity (aneurysm, hemorrhage, chronic kidney disease), and can result in death. Complication risk may correlate with increased AML volume. Historically, AMLs were treated surgically with embolization or tissue-sparing resection. In the EXIST-2 trial, everolimus significantly reduced AML volume in TSC patients. This analysis assesses the cost of reimbursing everolimus for TSC-related AML to the UK health care system. METHODS: A Markov model was built to analyze budget impact over five years. The treated population is estimated using model inputs. The status quo scenario assumed the three BoNT-As, Dysport® (abobotulinumtoxin-A), Botox® (onabotulinumtoxinA), or Xeomin® (incobotulinumtoxinA), are used in 33%, 52% and 15%, respectively, of patients with ULS receiving BoNT-A in the UK. The new market share was estimated by using a representative sample of ULS patients. Resource-use inputs were obtained from UK clinicians. One-way sensitivity analyses for model inputs were conducted. RESULTS: Total cost were decreased by between £245,765, in year 1; £854,601, in year 5 by shifting market share to abobotulinumtoxinA. The base-case scenario, BSC (no BoNT-A treatment) or with incobotulinumtoxinA or onabotulinumtoxinA cost more per patient per year than abobotulinumtoxinA. Sensitivity analyses showed that the observed difference between the BoNT-A treatments were the most influential parameters on budget impact, impacting both drug acquisition costs and physician visits. CONCLUSIONS: Study results suggest that the introduction of abobotulinumtoxinA and onabotulinumtoxinA for ULS in the UK could potentially reduce total treatment costs.