neuroleptic/serotonin syndrome, impulse control disorder, somnolence, sleep attacks, hallucinations, psychoses) and for all AEs combined. Index dates were assigned as first AE diagnosis for cases and first anti-PD prescription claim for controls. Patients were enrolled pre-index for ≥6 months and post-index for ≥12 months. All-cause costs were aggregated over 12 months post-index. Costs (2012 $) were adjusted using GLM models with covariates for demographics and pre-index comorbidities. **RESULTS:** A total of 71,883 patients met the inclusion criteria, 45,719 with ≥1 AE (mean[SD] age: 74.9[11.0] years, 55% male) and 26,164 with no AEs (mean[SD] age: 75.0[10.9] years, 59% male). Among patients with ≥1 AE, mean total all-cause costs per patient were substantially higher as compared with controls ($23,568 vs. $13,633; p<0.001), with the difference driven roughly equally by incremental inpatient and outpatient costs of $4,398 and $5,031, respectively (both p<0.001). For all AEs individually, patients experiencing the AE had substantially higher mean all-cause costs, with the largest differences for orthostatic hypotension ($30,551 vs. $17,635), hallucinations ($30,822 vs. $17,843), and nausea ($32,865 vs. $16,456) (all p<0.001). **CONCLUSIONS:** PD patients experiencing AEs incur substantially higher costs as compared with patients without AEs. These data may be useful in evaluating the cost-effectiveness of new PD therapies with more favorable AE profiles.

PND22

PREDICTORS OF COSTS IN DEMENTIA IN A LONGITUDINAL PERSPECTIVE

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OBJECTIVES: The current study is a longitudinal analysis of costs in dementia from a societal perspective. The data were collected as part of the AgeCoDe study. The aim of this study is to analyse excess costs of dementia over time while taking into account the initial degree of severity and to investigate potential predictors of costs over time. **METHODS:** Health care resource use and costs were assessed retrospectively using a questionnaire in four waves at 6-month intervals in a sample of dementia patients (N=175) and a non-demented control sample (N=173) matched for age and gender. Sociodemographic data, dementia severity and comorbidity at baseline, cognitive impairment and impairment in activities of daily living (ADL) were also recorded. Statistical analyses were performed by means of the χ^2 test or Fisher's exact test, two-tailed *t*-tests and linear mixed regression models with random intercepts for individuals. We used bootstrapped standard errors (based on 4000 replications) in regression analyses to account for the skewness of the cost data. **RESULTS:** For patients with mild dementia, costs increased by approximately €900 (US-$1250) per six months, while they decreased by €2700 (US-$3750) in patients with severe dementia. ADL impairment significantly predicted total costs in dementia patients. Higher age was associated with higher formal care costs, but lower informal care costs. **CONCLUSIONS:** In patients with mild dementia, costs rose over time, while they decrease in severely demented patients. Transition into a nursing home is likely in severely demented patients, which may reduce total costs from a societal perspective, owing to the fact that a high amount of informal care required by severely demented patients prior to transition into a nursing home may cause higher costs than inpatient nursing care.

PND23

HEALTH CARE RESOURCE UTILIZATION AND COSTS IN PATIENTS INITIATING NATALIZUMAB THERAPY FOR MULTIPLE SCLEROSIS IN THE UNITED STATES

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OBJECTIVES: Patients with multiple sclerosis (MS) who have relapses are treated with corticosteroids and sometimes admitted to the hospital. The objective of this study is to examine changes in corticosteroid utilization, MS-related inpatient hospitalization, and related costs in MS patients before and after initiating natalizumab treatment in a real-world setting. **METHODS:** A retrospective administrative claims analysis was conducted using a large US commercial and Medicare supplemental database. The study population included adult patients diagnosed with MS who initiated natalizumab treatment between January 1, 2007, and December 31, 2010 (index), had not received any MS disease-modifying therapy for 12 months prior to index, and had ≥24 months of continuous data (12 months before and after index). Patient characteristics at index and corticosteroid use, MS-related inpatient hospitalizations, and related costs 12 months before (pretreatment) and 12 months after (posttreatment) natalizumab treatment initiation were analyzed and described using paired statistical tests. **RESULTS:** Data were from 535 patients: 70.1% female, mean age 45.8 (standard deviation 11.2) years. Compared with the previous 12 months, the proportions of patients with oral and IV corticosteroid use significantly decreased by 10.3% (28.6% pretreatment vs 18.3% posttreatment; *P*<0.001) and 16.7% (34.8% pretreatment vs. 18.1% posttreatment; *P*<0.001), respectively, after 12 months from natalizumab initiation. Mean expenditure per patient of oral and IV corticosteroid prescriptions decreased by 57.1% (*P*=0.002) and 54.7% (*P*=0.007), respectively. A significant reduction was observed in the proportion of patients with MS-related inpatient hospitalizations (7.3% pretreatment vs. 3.0% posttreatment; *P*=0.001), as well as in MS-related inpatient hospital expenditures among patients with an inpatient admission (median cost per patient: $12,078 pretreatment vs $9,289 posttreatment; *P*=0.001). **CONCLUSIONS:** Indicators of MS relapses, MS-related inpatient hospitalizations and corticosteroid use, were significantly reduced in MS patients 12 months after initiating natalizumab treatment in a real-world setting both in terms of costs and health resource utilization.

PND24

ECONOMIC EVALUATION OF PROPHYLACTIC TREATMENT VERSUS ON DEMAND FOR SEVERE HEMOPHILIA A IN COLOMBIA

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OBJECTIVES: Hemophilia is a genetic disease in which there is a deficiency in the level of activity of the coagulation factors. Hemophilia A (factor VIII deficiency) has a prevalence of 3.96 per 100,000 in Colombia (96.7% male); Severe hemophilia is defined as a blood clotting factor level ≤1%. This analysis is aimed to estimate the cost-effectiveness of prophylactic treatment of severe hemophilia A, compared to demand treatment in Colombia. **METHODS:** A decision tree model was developed using a time horizon of life expectancy. A societal perspective was adopted; annual discount rate of 3% was applied to costs and effectiveness measures. Prophylactic treatment with recombinant factor VIII (25 UI/kg 3 times per week) was compared to on demand treatment (50 UI/kg TID for 7 days for each bleeding episode). A cohort of 1,000 patients (0-14 years) with an average weight of 40kg and inhibitors present was simulated. Effectiveness and probabilities of adverse events were taken from the literature. Costs (direct and indirect) were taken from local tariff manuals (SOAT and SISMED). Effectiveness measures were number of cases avoided of bleeding and joint damage. All data were validated with a clinical expert. Univariate sensitivity analysis was done. Costs are presented in 2012 US$. **RESULTS:** Over the time horizon evaluated, prophylactic treatment avoids 823 cases of bleeding and 292 of joint damage. Total expected costs with prophylactic treatment were US$2.6M compared to on demand treatment US$1.7M. The incremental cost effectiveness ratio (ICER) for prophylactic treatment was US$1,079/avoid bleed, US$3,042/avoided joint damage. Sensitivity analysis showed the robustness of the model. **CONCLUSIONS:** From the social perspective, prophylactic treatment of severe hemophilia A, with recombinant factor VIII would be a highly cost-effectiveness intervention with strong health benefits in number of cases of bleeding and joint damage avoided (cost-effectiveness threshold: 1 Colombian GDP per capita = US$7,235).

PND25

COST-EFFECTIVENESS ANALYSIS OF DONEPEZIL AND RIVASTIGMINE FOR MILD TO MODERATE ALZHEIMER'S DISEASE IN TAIWAN

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OBJECTIVES: Few studies regarding the head-to-head cost-effectiveness analysis of medications treating for Alzheimer's Disease have been conducted in Asia. The goal of this study is to perform a comparative assessment of donepezil and rivastigimine on the costs and efficacy of mild to moderate AD patients. **METHODS:** A four-state Markov model was built to simulate the disease progression of the mild to moderate AD patients' life span (from sixty five years of age to death). Transition probabilities between states and the cost of medical treatments at different stages derived from the local data in Taiwan. Analyses were run to evaluate outcomes for patients with mild AD from societal perspective. While all cost outcome have been discounted at 3% per annum. **RESULTS:** The result of the Markov cohort simulation shows that for the life expectancy in the long-term, rivastigmine treatment is the dominant strategy as it is more effective and economical than the alternatives. Specifically, treating patients with rivastigmine, compared with no treatment, yielded a 0.34 quality-adjusted life years (QALYs) increase per patient over the life time. Furthermore, the average cost savings per patient favored rivastigmine by resulting in US$10,503 from the societal perspective (2012 USD). For the donepezil versus rivastigmine base-case comparison, patients on donepezil gained 0.64 QALYs. Cost savings for the donepezil group were US$50,312 from the societal perspective. **CONCLUSIONS:** It is concluded that donepezil and rivastigmine are the two medical treatments that might be a cost saving strategy for mild or moderate AD patients in Taiwan from the societal perspective.

PND26

COST-EFFECTIVENESS ANALYSIS OF PROPHYLAXIS VERSUS ON-DEMAND SUPPLY OF FACTOR IX IN PATIENTS DIAGNOSED WITH SEVERE HEMOPHILIA B IN COLOMBIA

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OBJECTIVES: Hemophilia is a recessive genetic disease that does not allow adequate blood clotting; this is characterized by a defect in coagulation factors, needed for this function. Hemophilia B (factor IX deficiency) has a prevalence of 0.81 per 100,000 in Colombia (96% male). Severe hemophilia is defined as a blood clotting factor level ≤1%. This analysis is aimed to estimate the cost-effectiveness of prophylactic treatment of severe hemophilia B, compared to on demand treatment in Colombia. **METHODS:** A decision tree model was developed using a time horizon of life expectancy. A societal perspective was adopted, and an annual discount rate of 3% was applied to costs and effectiveness measures. Prophylactic treatment with recombinant factor IX (25 IU/kg 2 times per week) was compared to on demand treatment (50 UI/kg TID for 8.5 days for each bleeding episode). A cohort of 1000 patients (age 15 - 62), with an average weight of 60kg was simulated: estimates of effectiveness and probabilities of adverse events were taken from a literature. Costs (direct and indirect) were taken from local tariff manuals (SOAT and SISMED). Costs are presented in 2012 US$. Effectiveness measures were number of cases avoided of bleeding and joint damage. All data were validated with a clinical expert.