acteristics, treatments, symptoms, seizure frequency and severity as well as complete Patient Reported Outcomes (PRO) instruments (e.g. QOLIE-31/P, HADS). Univariate and multivariate logistic regressions were performed to identify variables associated with poor HRQoL (<Quartile 1 of the QOLIE-31/P total score). **RESULTS:** By May 2011, of the 2658 patients who had recorded a diagnosis of epilepsy and multiple seizures, 1025 completed a PRO assessment and were included in this analysis (mean age 37.5 years; 72.7% female; mean epilepsy duration from first diagnosis 17.5 years). Median Q1-Q3 QOLIE-31/P total score was 50.5 (37.1-65.2), with 256 patients being classified with poor HRQoL. Multivariate logistic regression indicated that poor HRQoL was more likely in patients reporting (Odds Ratio [95% Confidence Interval]): 1) moderate/severe problems concentrating (3.19 [2.00-5.08]), depression (2.61 [1.77-3.85]), memory problems (2.04 [1.29-3.24]), fatigue (1.75 [1.12-2.71]), anxiety (1.49 [1.00-2.22]); 2) severe side effects (2.34 [1.39-3.92]); 3) at least one tonic-clonic seizure during the 4 weeks before QOLIE-31/P completion (2.72 [1.65-4.50]); 4) age 25-50 years (1.77 [1.01-3.11] vs. age 0-25 years); and 5) shorter epilepsy duration (≤1 year 2.25 [1.23-4.13]; 1-10 years 1.70 [1.12-2.58]; both vs. >10 years). Patients on polytherapy with newer antiepileptic drugs (AEDs) were less likely to report poor HRQoL than patients on polytherapy with older AEDs (0.29 [0.11-0.74]). **CONCLUSIONS:** These analyses indicate that moderate/severe problems concentrating, depression, the occurrence of generalized tonic-clonic seizures and of severe side effects were the most predictive factors of poor HRQoL in the PatientsLikeMe Epilepsy Community. These results suggest that a holistic approach beyond seizure control should be considered when treating people with epilepsy.

PND38

PATIENT-REPORTED BURDEN OF WALKING IMPAIRMENT IN MULTIPLE SCLEROSIS

Sidovar M[1], Horowicz-Mehler N[2], Hawryluk EA[2], Mccarthy S[1]
[1]*Acorda Therapeutics, Inc., Hawthorne, NY, USA,* [2]*Quintiles Global Consulting, Hawthorne, NY, USA*

OBJECTIVES: Walking impairment (WI) is a disabling hallmark of multiple sclerosis (MS). This patient-centric study aimed to assess the clinical, psychological, and economic burden of WI. **METHODS:** This cross-sectional study compared MS patients with (test group: TG, PDDS>0) and without (control group: CG,PDDS=0). WI as assessed by the Patient Determined Disease Steps (PDDS) questionnaire. PDDS=3 describes patients with mild WI while PDDS=4 reflects patients using a walking device. Using validated patient-reported outcomes instruments, falls, depression (Center for Epidemiologic Studies Depression Scale) resource utilization, and work productivity (Work Productivity and Activity Impairment Questionnaire) were assessed. Chi-square and t-test provided statistical significance to $p<0.01$. **RESULTS:** 346 adult MS patients around 11 years post-diagnosis participated. WI was significantly different across groups (TG:PDDS=3.2vs.CG:PDDS=0). In the TG, patients with WI using a device reported more healthcare visits for WI than patients with mild WI (PDDS=4:58%vs.PDDS=3:13%). TG patients reported "falling sometimes" significantly more than CG patients (PDDS=3:62%; PDDS=4:50% vs. PDDS=0:14%). Compared to CG patients, more PDDS=3 TG patients reported visiting the hospital/ER (11% vs. 5%) or doctor's office (16%vs.5%) for falls. WI requiring the use of a device (PDDS=4) increased the reported healthcare visits (32%:hospital/ER;27%:doctor's visits). TG patients reported depression significantly more than CG patients and 40% of these TG patients explicitly linked depression to WI. Absenteeism (10%vs.5%) and impairment while working (35%vs.18%) were reported more often in TG compared to CG patients. **CONCLUSIONS:** In this sample, WI was associated with increased falls, health care utilization, depression and lesser work productivity. WI requiring use of a device appears to increase these effects. WI effects could not fully be isolated from cognitive impairment and other effects, and confounding by indication could affect estimates. Multivariate model research is needed to validate these results in a broader population and quantify associated costs.

PND39

WHAT IS THE INFLUENCE ON CLINICAL RESEARCH OF THE EMA GUIDELINE ON MEDICINAL PRODUCTS FOR THE TREATMENT OF ALZHEIMER'S DISEASE?

Caron M, Acquadro C, Emery MP
MAPI Research Trust, Lyon, France

OBJECTIVES: In 2009, the EMA published a guideline on medicinal products for the treatment of Alzheimer's disease. The guideline stipulates that symptoms improvement should be assessed in cognition (cognitive endpoint), activities of daily living (functional endpoint) and overall clinical response (global endpoint). The two primary endpoints should reflect the cognitive and functional domains. Global assessment should be evaluated as a secondary endpoint. The objective of this study is to review all products authorized by the EMA for the treatment of Alzheimer's before and after the publication of the guidance to see if the guidance had any influence on clinical research or is only making existing practices official. **METHODS:** The EMA website was searched with the keyword "Alzheimer" (EPAR section, Keyword search). All EPARs and Scientific Discussions corresponding to Alzheimer's medicines were downloaded and reviewed. **RESULTS:** Ten products were retrieved representing only two active substances: rivastigmine (8), and memantine hydrochloride (2). Four medicines were approved before the publication of the guidance, and six afterwards (all generics of rivastigmine). The review of the rivastigmine documents shows that the same studies were used for all products, and that primary endpoints were cognitive and global; functional was secondary. The review of the memantime documents shows that the same studies were used for all products. For two studies, the EMA advised the sponsors that primary endpoints should be functional and global; cognitive was secondary. For two other studies, global and cognitive measures were primary endpoints; functional was secondary. **CONCLUSIONS:** Before 2009, symptoms improvement is assessed in the three recommended domains. The primary and secondary endpoints, however, were not always consistent with those advised by the guideline, and sometimes contradicted them. The review cannot show any influence of the guidance on clinical research since all products approved after its publication are generics of rivastigmine.

PND40

ASSESSMENT OF DEMENTIA RISK AMONG CAREGIVERS OF ALZHEIMER'S CARE RECIPIENTS

Majethia U, Nayak R
St. John's University, Jamaica, NY, USA

OBJECTIVES: To make an assessment of cognitive abilities of caregivers of individuals with Alzheimer's disease and to determine the risk of developing dementia in this population. **METHODS:** A cross-sectional research design, utilizing a convenience sample and one-on-one interviews, was adopted to address the study objectives. Family caregivers were recruited from New York City caregiver support groups. Cognitive Abilities Screening Instrument (CASI), a pre-validated cognitive scale, was used to assess the risk of dementia among the caregivers and a demographically similar sample of non-caregivers. CASI tests nine cognitive domains, and a score of ≤ 74 on a scale between 1 and 100 indicates possible cognitive impairment. The component scores of CASI were utilized to derive Mini Mental State Examination (MMSE-CE) scores. Both MMSE-CE and individual component scores of CASI were compared for the caregiver and non-caregiver groups. **RESULTS:** The final data set consisted of 51 caregivers and 62 non-caregivers. Significant differences were observed between the two with respect to CASI score (t= -2.311, p= 0.001), MMSE-CE score (t= -1.943, p= 0.013) and individual domain scores. Prevalence and number of medical conditions seemed to affect caregivers' cognitive performance more than the non caregivers. Further, age and duration of caregiving were revealed to be significant predictors of dementia risk in the caregiver population based on both binary logistic (OR=10.706, P = 0.027,) and multiple linear regression (β=-0.306, P = 0.028) models. **CONCLUSIONS:** This study provides insights regarding the impact of caregiving on Alzheimer's caregivers, specifically with respect to their cognitive functioning. There is a greater likelihood of family caregivers experiencing cognitive decline, significantly raising their risk of developing dementia sometime in the future. Health interventions should be designed to make caregivers aware of the risks they face if they neglect their own health in the process of caregiving.

PND41

PARKINSON'S DISEASE QUESTIONNAIRE (PDQ-39) AS A PRIMARY ENDPOINT IN A TRIAL COMPARING DEEP BRAIN STIMULATION WITH BEST MEDICAL THERAPY VERSUS BEST MEDICAL THERAPY ALONE FOR ADVANCED PARKINSON'S DISEASE (PD SURG TRIAL): A RANDOMISED, OPEN-LABEL TRIAL

Jenkinson C[1], Williams A[2], Ives N[2], Rick C[2], Daniels J[2], Patel S[2], Wheatley K[2], Churchman D[3]
[1]*Health Services Research Unit, Department of Public Health, University of Oxford, Headington, Oxford, UK,* [2]*PD SURG Collaborative Group, PD SURG Trial Office, University of Birmingham, Birmingham, UK,* [3]*Isis Innovation Ltd., Oxford, Oxfordshire, UK*

OBJECTIVES: To assess whether combined surgery and best medical therapy resulted in better outcomes than best medical therapy alone, in patients with advanced Parkinson's disease (PD). **METHODS:** The PD SURG trial is an ongoing randomised, open-label trial. At 13 neurosurgical centres in the UK, between November 2000, and December 2006, patients with PD (that was not adequately controlled by medical therapy) were assigned to either, combined surgery and best medical therapy, or to best medical therapy alone. The primary endpoint was the quality of life PRO measure, the 39-item Parkinson's disease questionnaire (PDQ-39). Changes between baseline and 1 year were compared by use of t tests. **RESULTS:** 366 patients were randomly assigned to receive immediate surgery and best medical therapy (183) or best medical therapy alone (183). All patients who had surgery had deep brain stimulation. At 1 year, the mean improvement in PDQ-39 summary index score compared with baseline was 5.0 points in the surgery group and 0·3 points in the medical therapy group (difference −4·7, 95% CI −7·6 to −1·8; p=0.001); the difference in mean change in PDQ-39 score in the mobility domain between the surgery group and the best medical therapy group was −8·9 (95% CI −13·8 to −4·0; p=0.0004), in the activities of daily living domain was −12·4 (−17·3 to −7·5; p<0.0001), and in the bodily discomfort domain was −7·5 (−12·6 to −2·4; p=0.004). Differences between groups in all other domains of the PDQ-39 were not significant. Other serious adverse events will be reported. **CONCLUSIONS:** At one year, surgery and best medical therapy improved patient self-reported quality of life more than best medical therapy alone in patients with advanced Parkinson's disease. These differences are clinically meaningful, but surgery is not without risk and targeting of patients most likely to benefit might be warranted.

PND42

BURDEN OF DISEASE IN CAREGIVERS OF ALZHEIMER'S DISEASE IN BRAZIL: RESULTS FROM 2011 NATIONAL HEALTH AND WELLNESS SURVEY (NHWS)

Mould JF[1], Fujii RK[2], Paganini P[2], Manfrin DF[2]
[1]*Pfizer, Inc., New York, NY, USA,* [2]*Pfizer, Inc., São Paulo, SP, Brazil*

OBJECTIVES: Alzheimer's disease (AD) is the most common type of dementia for which there is no cure. In a world where lifespan is increasing, dementia is becoming more evident. In 2010, approximately 35.6 million people were living with dementia and this number is likely to increase to 115.4 million in 2050. This study is aimed to assess co-morbidity, quality of life (QOL), work/productivity loss, and medical resource utilization in caregivers of AD in Brazil. **METHODS:** A total of 12,000 individuals' (age 18+) self-reported data were collected from 2011 National