13,396 males representing 212.7 million American adults aged 18 to 85+ years. Nonparametric regression models were employed to express migraine prevalence as a function of age separately for each sex group. The salient characteristics of the fitted functions were evaluated by examining the first and second derivatives, corresponding to the velocity and the acceleration of prevalence over the age continuum. RESULTS: Study results suggest that migraine prevalence increases with age until about 34 years, where it reaches a maximum, then starts declining until 75 years when it reaches a plateau for both sexes. For females, the greatest rate of decline in migraine prevalence starts at 41 years and continues until age 63 where it reaches its minimum. The rate of decline in migraine prevalence for males, on the other hand, seems to be decreasing in a smooth monotonic fashion starting age 34 and reaches the female rate of change at 78 years. The dramatic change in both the slope and the curvature of the function for females around the perimenopausal age range warrants attention. CONCLUSIONS: These findings provide indirect evidence for the phenomenon of menstrual migraine. The inflection points on the female curve correspond to the age range of perimenopause and menopause in U.S. women. These inflection points are not observed on the male curve.

MODELING LONG-TERM “REAL WORLD” OUTCOMES OF DISEASE-MODIFYING THERAPY IN RELAPSING-REMITTING ONSET MULTIPLE SCLEROSIS
Skepeli C1, Brown MG2, Bhan V1
1Dalhousie University, Halifax, NS, Canada, 2Capital Health Nova Scotia, Halifax, NS, Canada
OBJECTIVES: Phase III clinical trials showed novel drugs introduced in the 1990s modified the natural history (NH) of relapsing-remitting onset definite multiple sclerosis (MS). A Nova Scotia Phase IV “real world” observational study confirmed the short-term effectiveness of these disease modifying therapies (MS-DMT), measured by Extended Disability Status Scale (EDSS) increase avoided per patient per year. This analysis projects these short-term results over a 20-year horizon to estimate long-term health outcomes of MS-DMT. METHODS: A probabilistic Markov model estimated EDSS progression for NH and MS-DMT cohorts with relapsing-remitting onset MS over a 20-year horizon. The model was based on 591 patients receiving MS-DMT from the Dalhousie MS Research Unit, stratified into three subgroups by final classification and disability severity: 1) mild relapsing-remitting MS (RRMS), 2) mild secondary-progressive MS (SPMS) and 3) mild or moderate SPMS. Health outcomes were measured as EDSS disability adjusted life years (DALYs) avoided per patient compared to NH. Relative benefit was defined as DALY burden avoided relative to expected DALYs given NH. The baseline analysis was a “best-case” scenario with full compliance for 20 years. RESULTS: The model found statistically significant benefit in all three subgroups. Among the mild severity subgroups, there were 1.7 (95% CI:1.2–2.2) DALYs avoided among RRMS patients and 2.6 (1.5–3.6) DALYs avoided among SPMS patients, for a combined benefit of 1.9 (1.2–3.2) DALYs avoided, or a 42% (20%–91%) relative benefit. Among the mild or moderate SPMS patients there were 1.1 (0.3–1.9) DALYs avoided (14%; 3–30%). Overall, the combined cohort had a benefit of 1.5 (0.5–2.1) DALYs avoided (29%; 6–63%). CONCLUSIONS: MS-DMT can have significant long-term benefit in terms of DALYs avoided, particularly in mild subgroups. This analysis is the first to model long-term change in mean EDSS, rather than delayed time to specific EDSS endpoints, and may help guide MS-DMT coverage decisions.

A LITERATURE REVIEW OF PATIENT-REPORTED OUTCOMES (PROS), NEUROPSYCHOLOGICAL AND COGNITIVE INSTRUMENTS IN PARKINSON’S DISEASE
Staniek V, Emery MP
Mapi Research Trust, Lyon, France
OBJECTIVES: To describe and compare the domains and psychometric properties of selected Patient Reported Outcomes (PROs) instruments, neuropsychological and cognitive, developed and/or used in patients with Parkinson’s disease (PD).
METHODS: A systematic literature review of published studies was conducted using MEDLINE (1990–2006), EMBASE (1990–2006) and the Mapi Research Trust databases. Only studies describing the development or use of a referenced instrument assessing Health-Related Quality Of Life (HRQOL), Activities of Daily Living (ADL), Fatigue/sleep, Neuropsychological and cognitive measures were included in the review. Instruments were selected if they were specifically developed for Parkinson’s disease, or used in clinical trials and for which psychometric properties were available. Caregiver reports were not included.
RESULTS: Sixty instruments were identified and 35 were selected for in-depth review. Seven questionnaires measured HRQL (2 generic and 5 PD specific). Of these, the PDQUALIF and the PDQ-39 are well validated but are not always sensitive to changes in RCTs. Four instruments assessed ADL/disability, with the UPDRS being generally used as a primary endpoint in RCTs. Six instruments measured sleep or fatigue, most of them have been validated in PD patients and are sensitive to change. Two symptoms (motor & non-motor) scales were selected, but lack evidence of good psychometric properties. Four psychological instruments and 12 neuropsychological/cognitive instruments were also selected. Most of these were not validated in PD patients and failed to demonstrate their sensitivity to change in clinical trials. CONCLUSIONS: The selected PRO instruments are very heterogeneous in their levels of validation, psychometric properties and sensitivity to change in clinical trials, depending on the dimension measured. For HRQOL, ADL/Disability and Sleep, reliable measures are available whereas advances are still needed to assess symptoms, psychological well-being or cognition.

PSICOMETRIC PROPERTIES OF THE TREATMENT SATISFACTION WITH MEDICINES QUESTIONNAIRE (SATMED-Q) IN PATIENTS WITH REFRACTORY EPILEPSY
Ruiz MA1, Rejas J2, Palacios G1, Pardo A1, Soto J2
1Universidad Autónoma de Madrid, Madrid, Spain, 2Pfizer Spain, Madrid, Spain
OBJECTIVES: Treatment of epilepsy is still challenging to the scientific community. Usually, these patients require more than one drug. Hence satisfaction with antiepileptic drugs becomes a major goal, as it is of crucial relevance for seizures control and patient wellbeing, particularly at the level of anxiety, depression and quality of life. This study assessed the psychometric properties of a recently developed questionnaire of Treatment Satisfaction (SATMED-Q) in subjects with refractory epilepsy.
METHODS: Patients with refractory epilepsy from epilepsy and neurology outpatient clinics, representative of the national distribution in Spain were included. Sociodemographic, anthropometric data, and the SATMED-Q (Treatment Satisfaction), and HAD (Anxiety and Depression) questionnaires were collected. Reliability and validity were determined. Factor analysis was used to check the instrument original structure. RESULTS: A sample of 768 consecutive patients [average age of 40.5 (13.5) years, 50.8% males and 24.3 (13.4) years of disease evolution]
were enrolled. Only 4.5% were not assessable and 659 (86.5%) were able to answer the SATMED-Q. The theoretical 6 factor solution explained 82.8% of the available variance; it was well defined, and all communalities were above 0.76. A strong correlation between Effectiveness and Impact on Daily Activities \((r = 0.525)\) was found. Dimensional Cronbach’s \(\alpha\) ranged between 0.857 and 0.936. The one-dimensional ICC was 0.893 (0.890–0.905, 95% CI) and Gutman two-half index was 0.935. No significant correlation was found between age and Treatment Satisfaction \((r = 0.055)\), Anxiety \((r = -0.17)\), and Depression \((r = 0.075)\). Neither between educational level and Anxiety \((r = -0.038)\), but educational level showed to be related with Depression \((r = -0.204; p < 0.001)\) and Treatment Satisfaction \((r = 0.169; p < 0.001)\). Treatment Satisfaction dimension levels interact significantly with Depression \((p < 0.001)\) and Anxiety \((p < 0.011)\) severity levels. CONCLUSIONS: The psychometric properties of the SATMED-Q are good in this specific population. Significant differences in Treatment Satisfaction are found depending on the Anxiety and Depression level.

**Abstracts**

**PND14**

**TREATMENT OF NEUROPATHIC PAIN IN MULTIPLE SCLEROSIS: A POPULATION BASED WILLINGNESS-TO-PAY ANALYSIS**

Iskedjian M1, Pwiko C1, Desjardins O1, Bereza B1, Jaszewski B1, Einarson TR1

1PharmIdeas Research and Consulting Inc, Oakville, ON, Canada, 2Bayer Healthcare, Toronto, ON, Canada, 3University of Toronto, Toronto, ON, Canada

**OBJECTIVES:** Multiple Sclerosis (MS) is a chronic neurological disease affecting the central nervous system with a prevalence rate of 240 per 100,000 in Canada. The prevalence of pain in MS ranges from 10%–80% (70% in a study we previously performed). Sativex® (SAT) is a new cannabis-based drug approved in Canada for neuropathic pain in patients with MS. Willingness-to-pay (WTP) elicits the extent of subjects’ preference for their chosen treatment, expressed as the amount they would hypothetically be willing to pay in insurance premiums in order to have access to the treatment. **METHODS:** The WTP instrument had a decision board (DB) and a questionnaire. A DB is a visual aid to help clinicians present clinical information about treatment options in a standardized manner. Two treatment options were presented on the board used in this study, with text and data describing them obtained from clinical experts and the literature. The first option was a “cocktail” of three medications: gabapentin, amitryptilin, and acetaminophen (“pills”), while the comparator was the same “cocktail” but adding SAT (“pills and oral spray”). The WTP instrument was administered to 500 participants from the general Canadian population, using the bidding game approach. Descriptive statistics were calculated. **RESULTS:** The mean age of the study population was 39 ± 13 years, 56% were female. The DB was facilitated in English (85%) and French (15%). Of the 500 interviews conducted, 253 respondents chose the “pills and oral spray” option. For these subjects, the mean WTP per month in additional insurance premium was CAD $8 (range = $0–$200, median = $4). **CONCLUSION:** Assuming only 51% in a general population are willing to pay additional premiums as reported, the obtained WTP would be able to fund the drug for all MS patients with pain (assumed 70%), with a remaining surplus of $3.24/person.

**PND15**

**RELAPSING-REMITTING MULTIPLE SCLEROSIS (RR-MS) PATIENTS’ VALUATION OF MS TREATMENT BENEFITS**

Narewski J1, Lloyd A1, Dewilde S1, Hass SL1, Miller DW2


**OBJECTIVES:** This study used a stated preference discrete choice experiment (DCE) to explore the preferences and willingness to pay (WTP) of RR-MS patients in the UK regarding the benefits of treatments. **METHODS:** The attributes in the DCE included the number of future relapses, presence of new nerve damage, progression in disability level and out of pocket cost (to estimate WTP for changes in attribute levels). Participants were asked to indicate their preference for hypothetical treatment profiles that varied attribute levels based on an orthogonal fold-over design. The patient sample \((n = 194)\) was recruited through advertisement with a patient advocacy group. WTP was estimated using logit analysis. **RESULTS:** Eighty-three percent of patients (mean age 44 years, 82% female) had experienced 1 or more relapses in the last 2 years and 46% required aid with ambulation. Patients had a mean annual household income of ≤$33,000 and monthly MS-related expenditures of approximately ≤$50. The estimated monthly WTP for a combined benefit of no disability progression, new nerve damage or relapses was approximately 9 times their current expenditures and 16% of their mean annual income. The most highly valued treatment outcome was avoidance of disability progression in the next year. Segmented analyses indicated that patients not currently experiencing a relapse and those with lower self-reported levels of disability had higher WTP for improvements in the other treatment benefit attributes. **CONCLUSION:** RR-MS patients indicated a differential demand for avoidance of MS related disability progression, relapses and nerve damage. Patients who were less severely affected by their RR-MS were willing to pay more to reduce the burden of their disease. This study underlines the high value patients place on the avoidance of MS sequelae, particularly disability progression.

**OSTEOPOROSIS**

**POS1**

**EFFECT OF COMORBIDITIES ON THE EARLY MORTALITY AFTER FEMORAL NECK FRACTURE IN ELDERLY IN HUNGARY**

Sebestyén A1, Boncz I1, Tóth F2, Betlehem J1, Nyárády J2, Jeges S2

1National Health Insurance Fund Administration (OEP), Budapest, Hungary, 2University of Pécs, Pécs, Hungary

**OBJECTIVES:** Aim of our study is to analyse the 30 days mortality of patients over 60 with femoral neck fracture according to comorbidities at admission. **METHODS:** Data derives from the database of National Health Insurance Fund Administration and based on the S7200 code (femoral neck fracture) of International Classification of Diseases (ICD) tenth revision and the codes of comorbidities. The retrospective study is based on patients discharged in 2000 from the institutions providing definitive care after the primary treatment of femoral neck fracture. Financial data has been controlled with a nationwide institutional questionnaire. We calculated 30 days mortality as a time between hospital admission and death. Early mortality rates are presented according to the dominant occurrence most frequently found comorbidities. **RESULTS:** Altogether 3783 patients over 60 years met the inclusion criteria. The overall 30 days mortality was 9%. The mortality of patients with comorbidities was 9.65%, while without comorbidities it was 2.1%. The early mor-