OBJECTIVES: Multiple sclerosis (MS) is a chronic progressive neurologic disease and one of the most common causes of disability among young adults. Although the clinical manifestations and symptoms of MS are diverse, disease severity is generally measured by ambulation based Expanded Disease Severity Scale (EDSS). While EDSS captures well the level of disability due to the involvement of lower extremities and urinary bladder, its ability to capture other aspects such as fatigue and mental function are poor. The aim of this study was to explore the relationship between two patient-based measures, a self-administered EDSS and Multiple Sclerosis Impact Scale (MSIS-29), a psychometrically validated instrument measuring the physical (20 items) and psychological (nine items) impact of MS. **METHODS:** In total, 553 Finnish persons with MS (PwMS) drawn from the membership register of the national patient association completed a postal survey, including EDSS and MSIS-29. **RESULTS:** PwMS at every (0-9) impairment level of the EDSS scale were represented. The mean EDSS score was 4.0, indicating moderate disability. The physical impact of MS was strongly related to disease severity, with the scores ranging from 3.0 in the mildest disease (EDSS 0) to 76.2 in the most severe disease (EDSS 8 – 9). The psychological impact increased synchronously with the EDSS score in mild disease (EDSS 0 - 3) and peaked at EDSS 5, declining thereafter from EDSS 5 to 7. In most severe disability (EDSS 8 – 9) the psychological impact of MS was equally high as in EDSS 4. **CONCLUSIONS:** The subjective physical burden of MS increases steadily with self-assessed disease severity, whereas the psychological burden does not go hand in hand with the self-assessed severity of the disease.

PND76

CHALLENGES IN TRANSLATING THE MULTIPLE SCLEROSIS INTERNATIONAL QUALITY OF LIFE (MUSIQOL) QUESTIONNAIRE IN 57 LANGUAGES

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OBJECTIVES: The Multiple Sclerosis International Quality of Life (MusiQoL) questionnaire is a self-administered, measure designed to evaluate the quality of life of patients with multiple sclerosis (MS). The MusiQoL was co-developed in 14 countries. It is composed of 31 items describing nine dimensions (activity of daily living, psychological well-being, symptoms, relationships with friends, relationships with family, relationships with health care system, sentimental and sexual life, coping, and rejection). The objective of this study is to present the challenges faced during the translation of the MusiQoL in 57 additional languages representing seven language families. **METHODS:** In each country, the translation process (linguistic validation) was conducted by a linguistic expert, using either the standard forward/backward methodology or the adjusted process, including cognitive interviews with six patients. The basis for discussion was the concept list developed in collaboration with the authors. **RESULTS:** Semantic and cultural issues emerged during the process. First, item 6 (had difficulty with your occupational activities: e.g., integration, interruption, limitation…?) could not be literally translated in most of the countries. Patients had difficulties understanding the words "integration, interruption, limitation." The periphrasis and examples suggested in the concept list had to be used in most cases. Examples of solutions will be provided. Second, activities (e.g., shopping, going out to a movie, Do-It-Yourself, gardening) described in the original had to be adapted to the religious and social context of the target countries. For instance, "going out to a movie" had to be replaced by "going to an amusement park" in Saudi Arabia, since cinemas are forbidden for religious reasons. Other examples will be presented. **CONCLUSIONS:** The initial simultaneous development of the MusiQoL in 14 countries minimized the challenges faced during the translation in 57 additional languages. The collaboration with the developers and the patients' interviews helped to solve the major issues.

PND77

RELAPSING REMITTING MULTIPLE SCLEROSIS PATIENTS INITIATED ON ORAL DMF REPORT A BETTER QUALITY OF LIFE COMPARED TO PATIENTS ON PLATFORM THERAPIES AS MEASURED BY EQ-5D

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BACKGROUND: Th EuroQol dimension (EQ-5D) is a widely used, standardised, quality of life measure producing health profildes, indices and states. **OBJECTIVES:** To assess how people with Multiple Sclerosis (MS) on delayed-release dimethyl fumarate (DMF; also known as gastro-resistant DMF) and prior approved interferon β-1a/b or glatiramer acetate (ABCRE) therapies rate their quality of life, based on responses to the EQ-5D. **METHODS:** Data were identified from the Adelphi MS Disease Specific Programme, a cross-sectional study of MS patients in five EU countries and the US. Relapsing Remitting MS (RRMS) patients were identified, receiving DMF or ABCRE therapies with treatment duration greater than 12 months. General HRQoL was evaluated using the EQ-5D 3 level utility score, a standardized instrument providing a simple, generic measure of health, consisting of 5 questions measuring dimensions of health states (mobility, self-care, usual activities, pain/discomfort, and anxiety/depression). A visual analog scale (VAS) is also included to measure overall health. Inverse-probability-weighted regression-adjustment estimated average treatment effects (ATEs) on the EQ-5D 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. **RESULTS:** A total of 258 (30 DMF, 228 ABCRE) patients completed the EQ-5D questionnaire (mean age, 37.4 years; 31% male) with a mean time since diagnosis of 5.57 years. There was a significant difference in the EQ-5D utility score between the DMF and ABCRE cohorts (ATE: +0.075, p=0.016, vs. 0.82 for ABCRE). Similarly, the overall VAS health reported by patients in the DMF cohort was significantly higher than the ABCRE cohort (ATE: +10.84, p<0.001, vs 74.55 for ABCRE). **CONCLUSIONS:** Patients on DMF reported significantly better functioning and quality of life compared with ABCRE patients, as measured by the EQ-5D.

PND78

DIFFERENCES IN DISEASE SPECIFIC HRQOL IN RRMS PATIENTS INITIATED ON ORAL DMF OR PLATFORM THERAPIES IN EUROPE AND US

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BACKGROUND: Multiple sclerosis (MS) is an unpredictable disease that can have physical, psychological, and social impacts, reducing health-related quality of life (HRQoL). **OBJECTIVES:** To compare the HRQoL 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 the US. Relapsing Remitting MS (RRMS) patients were identified, receiving DMF or ABCRE therapies with treatment duration greater than 12 months. HRQoL was assessed using the Hamburg Quality of Life Questionnaire in MS (HAQUAMS), consisting of five domains (fatigue/thinking, mobility of lower limbs, mobility of upper limbs, social function and mood) in which higher scores indicate poorer HRQoL. Inverse-probability-weighted regression-adjustment estimated average treatment effects (ATEs) on the HAQUAMS 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. **RESULTS:** A total of 252 (29 DMF, 223 ABCRE) patients completed the HAQUAMS questionnaire. The overall HAQUAMS score was significantly lower in DMF patients compared to ABCRE patients (ATE=-0.45, p<0.001, vs. 1.95). Significant differences were observed in four of the five subscales, as follows: fatigue/thinking (ATE=-0.47, p=0.001, vs. 1.90), lower limb mobility (ATE=-0.43, p=0.009, vs. 1.84), social function (ATE=-0.54, p<0.001, vs. 2.05), and mood (ATE=-0.45, p<0.001, vs. 2.40). The ATE for upper limb mobility score was not statistically significant (ATE=-0.15, p=0.075, vs. 1.38). **CONCLUSIONS:** RRMS patients on DMF had significantly better HRQoL as measured by the HAQUAMS, versus RRMS patients on ABCRE therapies.

PND79

A SYSTEMATIC REVIEW OF THE HUMANISTIC BURDEN OF DISEASE IN PATIENTS WITH FABRY DISEASE

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OBJECTIVES: Fabry disease is a rare, progressive, X-linked lysosomal storage disorder caused by deficiency of α-galactosidase A. Multiple major organs are affected, impacting on health-related quality of life (HRQoL). Symptomatic disease requires lifelong treatment with intravenous enzyme replacement therapy (ERT; two products available), which has been shown to improve long-term outcomes, delay organ damage and improve HRQoL. We present the results of a systematic review of the humanistic burden of Fabry disease. **METHODS:** We conducted a systematic search of MEDLINE, Embase and congress proceedings to identify studies reporting general HRQoL in patients with Fabry disease. **RESULTS:** The search identified 30 relevant publications reporting data for ERT-treated and -untreated male and female adult and paediatric patients. The majority of studies assessed HRQoL using the 36-item Short-Form Health Survey (SF-36; n=18) and/or 5-dimension European Quality of Life instrument (EQ-5D; n=8). HRQoL was reduced compared with the general population (n=12), and was worse than or similar to other chronic or progressive conditions (n=8); furthermore, HRQoL deteriorated with age (n=2) and with progressive disease severity (n=1). Two clinical trials were identified (one placebo-controlled and one open-label) that described HRQoL improvements with ERT (agalsidase alfa). There were five analyses of registry data for patients receiving ERT: four studies demonstrated sustained HRQoL improvements with up to 5 years of agalsidase alfa treatment, and one study reported improvements after 1 and 2 years of agalsidase beta therapy. In two small cohorts, overall HRQoL either improved in all SF-36 domains after 10 years of ERT (n=6 patients) or did not significantly decrease over 7 years of ERT (n=10 patients). **CONCLUSIONS:** Patients with Fabry disease experience significant impairment in HRQoL, and the limited available data suggest that this improved while on ERT. Further studies are required to quantify treatment-associated HRQoL outcomes.

PND80

HEALTH-RELATED QUALITY OF LIFE IN DOUBLE-BLIND PHASE III STUDIES OF BRIVARACETAM AS ADJUNCTIVE THERAPY OF PARTIAL-ONSET SEIZURES

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OBJECTIVES: To assess the effect of brivaracetam (BRV), a new adjunctive therapy of partial-onset seizures (POS), on health-related quality of life (HRQoL). **METHODS:** Data from three previously reported Phase III trials of BRV in adults with refractory POS (NCT00490035; NCT00464269; NCT01261325) were pooled. The QOLIE-31-P was collected at randomization and after the 12-week treatment period or early termination. The QOLIE-31-P is an epilepsy-specific instrument with seven subscales and a Total score ranging from 0 (worse) to 100 (better HRQoL). Mean change from baseline to last observation was compared between BRV and placebo using ANCOVA controlling for baseline score. Percentages of meaningfully improved patients were calculated using published thresholds. **RESULTS:** There were 422, 179, 324, and 235 patients in the placebo, BRV 50mg/day, 100mg/day, and 200mg/day groups respectively. All mean (SD) changes were positive; they were similar for placebo and BRV for the Total score (+2.8 [12.7], +3.0 [14.0], +2.4 [14.0], +3.0 [12.1]) and most subscale scores. There was a BRV dose response for Energy/Fatigue (lower scores), Daily Activities and Seizure Worry (both higher scores). BRV 100mg/day showed significantly larger improvements than placebo (+7.3 [24.6] vs +5.0 [23.1]; p=0.044) on the Seizure Worry subscale; this was the only significant result. 43.6%, 41.7%, and 36.6% of BRV 50mg/day, BRV 100mg/day, 200mg/day patients experienced a meaningful improvement in the Total score, respectively; the rate was 38.6% for placebo. **CONCLUSIONS:** Changes in HRQoL were small and generally comparable