

positively correlated with one another ( $0.20 < r < 0.73$ ), and significantly negatively correlated with PDDS scores ( $-0.82 < r < -0.07$ ). The physical functioning domain correlated most strongly with PDDS scores ( $r = -0.82$ ,  $p < 0.001$ ). Strong correlations were also noted among the role-physical ( $r = -0.58$ ,  $p < 0.001$ ), social functioning ( $r = -0.37$ ,  $p < 0.001$ ), and bodily pain ( $r = -0.28$ ,  $p < 0.001$ ) domains. The domains correlating most weakly with PDDS scores were vitality ( $r = -0.23$ ,  $p < 0.001$ ) and mental health ( $r = -0.07$ ,  $p = 0.03$ ). **CONCLUSIONS:** As expected, the patient-rated PDDS scores were more strongly associated with domains related to physical health status. To capture the broader psychosocial impact of MS on patient HRQL, additional patient-reported outcomes need to be utilized.

#### PND52

##### RESPONSIVENESS OF THE MULTIPLE SCLEROSIS INTERNATIONAL QUALITY OF LIFE AND SHORT FORM-36 QUESTIONNAIRES TO EXPANDED DISABILITY STATUS SCALE SCORE CHANGES IN SUBJECTS WITH MULTIPLE SCLEROSIS: FINAL 24-MONTH RESULTS FROM AN INTERNATIONAL OBSERVATIONAL STUDY

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**OBJECTIVES:** Quality of life (QoL) is an important measure in multiple sclerosis (MS), complementing clinical assessments such as the Expanded Disability Status Scale (EDSS). The MS International QoL (MusiQoL) questionnaire is a validated, MS-specific instrument. This multicentre, observational study assessed responsiveness of MusiQoL versus the Short Form-36 version 2 (SF36v2) to changes in EDSS score over 24 months in subjects with MS ( $\geq 18$  years; EDSS  $\leq 7.0$ ; treated/untreated). **METHODS:** MusiQoL, SF36v2 and EDSS scores were recorded at baseline (BL) and 6-monthly intervals to month 24 (M24). Primary endpoint: change in MusiQoL index score and effect size (ES) to M24. Secondary endpoints included change in MusiQoL and SF36v2 scores and ES (BL-6-monthly assessments). **RESULTS:** Six hundred subjects enrolled in 12 countries; 452 had evaluable BL and M24 EDSS and MusiQoL index data. BL mean (SD) EDSS score was 2.9 (1.9), mean (SD) MusiQoL index score was 68.5 (14.3), and mean (SD) MusiQoL subscale scores ranged from 59.8 (25.0) to 85.5 (18.2). EDSS score worsened by M24 in 89 subjects (19.7% vs expected 30%); mean (SD) change in MusiQoL index score was 0.30 (12.3) in non-worsened (ES: 0.02) and -2.3 (11.6) in worsened (ES: -0.17) subjects. At M24, larger (mean [SD]; ES) changes were seen in MusiQoL Relationship with Healthcare System (-6.0 [16.9]; -0.40) and Sentimental and Sexual Life (-6.4 [26.2]; -0.22) subscale scores for worsened subjects; in Psychological Well-Being (+4.8 [21.6]; 0.20) subscale score for non-worsened subjects; and in the SF36v2 physical component (-2.5 [6.7]; -0.24), physical functioning (-3.3 [7.6]; -0.28), bodily pain (-3.1 [10.3]; -0.28) and emotional (-2.8 [14.1]; -0.22) subscale scores for worsened subjects. **CONCLUSIONS:** MusiQoL index score detected poorer QoL in subjects with worsening EDSS scores. Most MusiQoL scores decreased over 24 months in subjects with more severe disability, indicating poorer QoL and confirming the utility of the MS-specific MusiQoL questionnaire in rating QoL.

#### PND53

##### THE PATIENT-REPORTED BURDEN OF IMPAIRED WALKING IN MULTIPLE SCLEROSIS

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**OBJECTIVES:** Walking impairment is recognised as one of the most distressing disabilities for people with Multiple Sclerosis (MS) and is reported in approximately 75% of patients. The objective of this analysis is to assess the impact of impaired walking on quality of life, and on direct and indirect costs to society. **METHODS:** The NARCOMS registry is a voluntary MS patient self-report database operating mainly in the US. The registry collects MS related data semi-annually through web-based and mail questionnaires, and periodically administers additional surveys on specific topics of interest, such as mobility. One of the main measures used for assessing walking impairment is the Multiple Sclerosis Walking Scale 12 (MSWS12). The Patient Determined Disease Step (PDDS) scale is used to measure the level of disease progression. NARCOMS data collection also addresses patient reported quality of life through the EuroQoL-5 Dimensions (EQ-5D) and the 12-item Short-Form survey (SF-12), as well as patients' physical activities, work life, and healthcare resource use. We used descriptive statistics, and univariate analyses to describe and quantify the cross-sectional relationship between walking impairment and other patient outcomes. **RESULTS:** A total of 2276 patients were randomly selected from the NARCOMS database, of which 1838 (81%) were female. The sample population had a mean age of 46 years, and a mean PDDS score of 3.0. Univariate analysis demonstrated that increases in MSWS-12 scores (decrease in ambulation) were negatively correlated with quality of life as measured by EQ-5D. An increase in MSWS-12 score was also associated with increases in visits to MS neurologists and physiotherapists, increases in caregiver visits, as well as reduced productivity. **CONCLUSIONS:** MS patients with less severe walking impairment showed better quality of life, lower health care utilization and higher productivity. Additional research using multivariate models should be encouraged to further characterize the impact of impaired walking on MS patients.

#### PND54

##### QUALITY OF LIFE IMPAIRMENT, DISABILITY, AND ECONOMIC BURDEN ASSOCIATED WITH CHRONIC DAILY HEADACHE FOCUSING ON CHRONIC MIGRAINE WITH OR WITHOUT MEDICATION OVERUSE: A SYSTEMATIC REVIEW

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**OBJECTIVES:** To evaluate the evidence for quality of life (QoL) impairment, disability, healthcare resource use, and economic burden associated with chronic daily headache (CDH), particularly chronic migraine (CM). **METHODS:** Systematic review and qualitative synthesis of studies of patients/subjects with CDH ( $\geq 15$  headache days/month) that included CM, reporting QoL or disability outcomes, healthcare resource utilisation or associated direct costs. **RESULTS:** Thirty-four studies were included: 25 of patients; 9 of subjects from the general population; 16 reporting QoL and 14 reporting disability outcomes; 4 reporting on healthcare resource utilisation and/or costs. Data were not amenable to statistical pooling. In studies reporting QoL using SF-36 or SF-12 instruments: CDH was consistently associated with lower QoL compared to normative/healthy control (5/5 studies) or episodic headache (EH) (6/6 studies); 3/4 studies showed CDH with migraine was associated with lower QoL than CDH without migraine; 3/5 studies showed CDH with medication overuse headache (MOH) was associated with lower QoL than CDH without MOH; 4/4 studies suggested a significant negative QoL impact when CDH was with a comorbidity. In studies reporting disability using the MIDAS instrument, CDH was consistently associated with greater disability and productivity (D&P) loss than EH (7/7 studies), 1/2 studies showed CDH with migrainous features was associated with greater D&P loss than CDH without migraine, 1/1 studies showed CDH with MOH was associated with greater D&P loss than CDH without MOH and 1/1 studies suggested a significant negative impact when CDH was with a named comorbidity. In the two most comprehensively reported economic studies, CDH was associated with more consultations, more or longer hospitalisations and higher direct costs compared to EH. **CONCLUSIONS:** The findings underline the disabling nature and QoL detriment of CDH, and in particular of CM and CDH with MOH, and negative impact on workplace productivity compared to other headache types.

#### PND55

##### THE PREDICTORS OF HEALTH-RELATED QUALITY OF LIFE IN PEDIATRIC EPILEPSY: A SYSTEMATIC REVIEW

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**OBJECTIVES:** A number of studies evaluated different predictors of health-related quality of life (HRQoL) in children and adolescents with epilepsy, but the findings of these studies were often contradictory and it was not possible to draw general conclusions. Therefore, this review was organized with the aims to identify in a systematic way the predictors of HRQoL in pediatric epilepsy. **METHODS:** Searches of the literature in Pubmed, Scopus, and Web of Science, with searches of relevant journals were performed. In total, 14 studies met the inclusion criteria (participant aged up to 18 years, HRQoL was assessed with an epilepsy specific and/or generic questionnaire/s, HRQoL predictors were identified using regression models, and the study was published in a peer-review journal). The methodological quality of the studies was assessed using predefined criteria. **RESULTS:** All identified studies were cross-sectional with the quality scores ranging 7 (low) - 14 (high) points. Strong evidence was found for age at epilepsy onset (younger age), a number of antiepileptic drugs (AEDs), and parental depression as HRQoL predictors in both, children and adolescents. Moderate evidence was found for attention problems, overall intelligence (lower) and family (i. e. structure, parental anxiety, etc.). Specific to adolescents with epilepsy, seizure worry/concerns and side effects of AEDs were found as strong predictors and epilepsy severity, while a number of AEDs as moderate. Weak evidence and inconclusive data exist for other predictors (i.e. social skills, duration of epilepsy, seizure frequency and severity, neuropsychiatric comorbidity, side effects of AEDs, autonomy, social support, victimization, economic status, and so forth). **CONCLUSIONS:** This systematic review identified age at epilepsy onset, a number of AEDs, and parental depression as strong HRQoL predictors in pediatric epilepsy, but specific to adolescents only, seizure worry/concerns and side effects of AEDs were identified. Other predictors were of lesser importance or were unimportant.

#### PND56

##### QUALITY OF LIFE ASSESSMENTS IN ADULTS WITH ATTENTION DEFICIT/HYPERACTIVITY DISORDER - A SYSTEMATIC REVIEW

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**OBJECTIVES:** A growing body of evidence suggests that symptoms of attention-deficit/hyperactivity disorder (ADHD) persist into adulthood and are associated with ongoing impairments in quality of life (QoL). The objective of the study was to identify the most commonly used QoL instruments in adults with ADHD and to examine their psychometric properties. **METHODS:** A systematic literature review was conducted to identify articles from 1990 to May 2011 using PUBMED and Pro-QoLID. The search was limited to English language and key search terms included but were not limited to ADHD, quality of life, psychometrics, questionnaires, and adults. Identified articles were screened further to exclude clinical studies not measuring QoL, review articles relating to ADHD and QoL, and studies with  $n < 30$ . **RESULTS:** The search yielded a total of 89 articles of which 16 were included in the final review. The Adult ADHD Quality of Life (AAQoL) and the ADHD Impact Module