yearly frequency and average consumption. **RESULTS:** The study enrolled 210 MS patients older than 18 years (73.5% female; 70.7% female). Patients with mild disability (according to self-reported Expanded Disability Status Scale [EDSS]) represented 40.4% of patients, 43.7% had moderate disability and 15.9% had severe disability. The overall yearly direct costs (mean [95% CI]) associated to patients with mild, moderate and severe disability were BRL31,473 [9,234-93,347], BRL19,371 [4,651-34,090], and BRL15,945 [5-75,579] (IBRL = 0.4937USD), respectively. Disease-modifying therapies (DMTs) were the major component of the total yearly cost, ranging from 56.3% among mild patients to 62.9% in the severe group (85.5% in the total sample), followed by aids and home modifications (mild: 2.3%; moderate: 2.3%; severe: 15.1%; total sample: 4.3%). Patients with moderate disability had higher absolute costs related to inpatient care, emergency visits, laboratory and imaging tests, and DMTs than the other disability groups, while those with severe disabilities presented higher costs in the remaining categories (consultations, co-medications and OTC medications, aids and home modifications, and professional caregivers). To our knowledge, this is the first time a cost analysis of MS in Brazil is being performed accounting for the cost of MS patients. Our findings indicate that MS represent a significant economic burden for both the health care system and patients and their families, with different expenditures profiles depending on the EDSS level.

**PD7**

**ARGENTINIAN SURVEY IN THE CASE OF ILLNESS AND UNMET NEEDS IN MULTIPLE SCLEROSIS: TREATMENT EXPERIENCE & THE COSTS OF MS PATIENTS IN ARGENTINA**

**Ordoñez Molina J.E., Orozco Giraldo J.J.**

**Objective:** The objective of the study was to assess the cost of MS patients in Argentina categorized by disease severity using a societal perspective. **METHODS:** This was a cross-sectional survey including MS patients from 21 MS centers in 12 cities of Argentina conducted to collect information on demographics, disease characteristics, disease severity, comorbidities, relapses, resource utilization and patient reported outcomes, associated with MS. **RESULTS:** Medical expenses were stratified by disease severity and included: inpatient (mean ± SD) and outpatient care for relapses, inpatient care for MS-related hospitalization (pneumonia, heart, lung and other MS-related) and inpatient care for relapses in patients with EDSS ≥7. Disease-modifying therapies (DMTs) were the major component of the total yearly cost, ranging from 56.3% among mild patients to 62.9% in the severe group (85.5% in the total sample), followed by aids and home modifications (mild: 2.3%; moderate: 2.3%; severe: 15.1%; total sample: 4.3%). Patients with moderate disability had higher absolute costs related to inpatient care, emergency visits, laboratory and imaging tests, and DMTs than the other disability groups, while those with severe disabilities presented higher costs in the remaining categories (consultations, co-medications and OTC medications, aids and home modifications, and professional caregivers). **CONCLUSIONS:** To our knowledge, this is the first time a cost analysis of MS in Brazil is being performed accounting for the cost of MS patients. Our findings indicate that MS represent a significant economic burden for both the health care system and patients and their families, with different expenditures profiles depending on the EDSS level.

**PD10**

**ANÁLISIS DE COSTO-EFECTIVIDAD DEL TRATAMIENTO PROFILÁCTICO VERSUS A DEMANDA EN ADULTOS JÓVENES CON HEMOFILIA A SEVERA EN COLOMBIA**

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**Objective:** The proline with Factor VIII (FVIII) in hemophilia A severe was utilized in países desarrollado, in países en desarrollo hay controversia por sus costos. El objetivo de este estudio fue calcular el costo incremental (ICER) de FVIII versus a demanda a prevenir episodios de sangrado y hemorragias articulares en adultos con hemofilia A severa en Colombia. **METHODS:** Efecto de los tratamientos fue tomado de la literatura. El modelo de análisis es Markov con eventos anuales y una tasa de descuento del 3% y la perspectiva de tercero pagador. **RESULTS:** El costo total por episodio de sangrado y hemorragias articulares fue USD 5.076 y USD 5.178 para hemofilia A y B severa, respectivamente. **CONCLUSIONS:** La profilaxis con FVIII es un tratamiento costo-efectivo en niños con hemofilia A severa y que presentan riesgo de sangrado y hemorragias articulares al menos una vez al año.

**PD11**

**COST-EFFECTIVENESS ANALYSES OF NATALIZUMAB FOR 2ND LINE VERSUS GLATIRAMER ACETATE IN THE TREATMENT OF RELAPSING-REMITTING MULTIPLE SCLEROSIS PATIENTS IN BRAZIL**

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**Objective:** Multiple sclerosis (MS) is a neurologic disease that can dramatically affect patients. The aim of this study is to conduct a cost-effectiveness analysis of natalizumab (Tyasber®) versus glatiramer acetate (Copaxone®) for treatment of Relapsing-Remitting Multiple Sclerosis (RRMS) patients from the Brazilian Public Healthcare System (SUS) perspective. **METHODS:** A Markov model with a 20-year time horizon comparing glatiramer acetate to natalizumab was developed. Health states were based on EDSS and relapses (moderate or severe). We obtained relapse and disability progression transition probabilities from natural history studies on RRMS patients. In each monthly cycle, patients can discontinue treatment, remain stable, progress to higher MS EDSS state, experience Progressive Multifocal Leukenocesphealopahy (PML) or die. Patients with EDSS score ≥ 7.5 receive best supportive care. Resource use and costs were validated by an expert’s panel and valued using Brazilian public official lists (DATASUS and BPS). Costs and outcomes (5%) were discounted. Probabilistic sensitivity analyses (PSA) confirmed the consistency of base case results. **CONCLUSIONS:** For a patient with RRMS, this model shows that natalizumab was cost-effective when compared to treatment with glatiramer acetate, assuming the threshold of USD 100,000/QALY commonly mentioned by the Ministry of Health in Brazil.
44mcg was chosen as comparator since it is the most widely prescribed disease modifying therapy in Brazil. We used a Markov model with 20-year time horizon comparing natalizumab to IFNB1a 44mcg. Health states were based on EDSS and relapses (moderate or severe). Since there are no published data evaluating long-term course specifically in HARRMS patients, transition probabilities between health states were based on real-world, historical studies on unselected RRMS patients, and relapse probabilities based on a post-hoc analysis of the pivotal natalizumab AFFIRM trial. This is a rather conservative approach since transition probabilities may be slower. In this proposed model then expected for patients with HARRMS and so the benefit from natalizumab could be underestimated. In each monthly cycle, patients can discontinue treatment, remain stable, progress to higher EDSS state, experience Progressive Multifocal Leuкоencephalopathy or die. Patients with EDSS score ≥7.5 receive best supportive care. Resource use and costs were validated by an expert's panel and valued using Brazilian official lists (DATASUS and BPS). Costs and outcomes were discounted (5%). Probabilistic sensitivity analyses (PSA) covered variance in efficacy and costs. RESULTS: Use of natalizumab was associated with slower EDSS progression and reduced relapse burden. Life years gained with natalizumab and IFNB1a 44mcg were 10.90 and 10.54, and costs were USD191,977 and USD132,446, respectively. In the base-case, natalizumab was dominant versus IFNB1a 44mcg. In the probabilistic sensitivity analysis, the probability of natalizumab being dominant versus IFNB1a 44mcg was 60% versus 39% respectively. Furthermore, using a threshold of 5% for willingness to pay, natalizumab was cost-effective only in 3.6% of simulations. CONCLUSIONS: For a patient with HARRMS, the model shows natalizumab was dominant when compared to IFNB1a 44mcg in the Brazilian Public Health Care System.

PND13 BURDEN OF MULTIPLE SCLEROSIS AND UNMET NEEDS IN BRAZIL: HEALTH CARE RESOURCE UTILIZATION
Silva NL1, Takemoto M2, Damasceno B1, Fragoso YD1, Finkelsteijn A3, Gomes M1, 4
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OBJECTIVES: To assess the health care resource utilization (HRU) of Brazilian multiple sclerosis (MS) patients and 271 parents completed the survey. Mean age of adult patients was 32 years. Randomized treatment-choice questions with known statistical properties. Each question required respondents to choose between a 30-minute nebulizer twice daily to a 10-minute DPI twice daily was 6.3 times more important for adult patients and 2.0 times more important for parents than an improvement in dry cough from moderate to mild. Stated adherence for adult and pediatric patients was 20-30% higher for DPIs versus nebulizers. CONCLUSIONS: Treatments administered with more convenient devices such as DPIs and shorter administration times are associated with higher utility and higher stated adherence in adult and pediatric patients.

PND15 BURDEN OF MULTIPLE SCLEROSIS AND UNMET NEEDS IN BRAZIL: MEASUREMENT OF FATIGUE USING MODIFIED FATIGUE IMPACT SCALE
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OBJECTIVES: Fatigue is one of the most frequent symptoms in patients with multiple sclerosis (MS). This study aimed to examine the severity and impact of fatigue in MS Brazilian patients. METHODS: This was a cross-sectional, multicenter study conducted in 8 Brazilian major MS treatment sites. Fatigue was assessed using the Modified Fatigue Impact Scale (MFIS), which evaluates the impact of fatigue on 3 dimensions of patients’ daily life: physical, cognitive and psychosocial. The patient scores 0 (lower impact) to 8 points (higher impact). The final score was classified according to the level of severity: absent, mild, moderate, severe, and very severe. RESULTS: Among 305 MS patients, of which the mean age was 40.7 [standard deviation = 11.5] years and 70.7% were females. Patients with mild disability (according to self-reported Expanded Disability Status Scale [EDSS]) represented 40.4% of patients, 43.7% had moderate disability and 15.9% had severe disability. In the overall sample, the impact of fatigue was considered absent, low and high in 39%, 32% and 19% of patients, respectively. Any impact (both low and high summed) was reported by 33%, 63%, and 66% of patients with mild, moderate and severe disability, respectively. The mean MFIS total score for mild, moderate and severe patients was 29.3, 45.0, and 45.4 [86 in the total sample]. The mean impact scores for each MFIS dimension in the total sample were 20.0 (physical, range 0-30), 14.7 (cognitive, range 0-40), and 3.9 (psychosocial, range 0-8), meaning that fatigue has a proportionally higher impact in the physical than the cognitive or psychosocial domains. CONCLUSIONS: These findings indicate that the majority of fatigue-related health problems fatigued patients notice some adverse impact of fatigue in their daily lives, particularly related to the physical domain.

PND16 BURDEN OF MULTIPLE SCLEROSIS AND UNMET NEEDS IN BRAZIL: MEASUREMENT OF HEALTH-RELATED QUALITY OF LIFE USING EQ-5D
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OBJECTIVES: To measure the health-related quality of life (HRQL) of multiple sclerosis (MS) patients and examine potential associations between HRQL and patients’ characteristics. METHODS: This was a cross-sectional, multicenter study conducted in 8 Brazilian major MS treatment sites. HRQL was assessed using the Brazilian version of the EQ-5D and patients self-evaluated their HRQL and health status using five dimensions (mobility, self-care, usual activities, pain/discomfort and anxiety/depression) and a visual analog scale (VAS). The EQ-5D index was calculated based on the value set derived from the UK population, since the Brazilian value set is not available. RESULTS: The study enrolled 210 MS patients, of which the mean age (standard deviation [SD]) was 40.7 [11.5] years and 70.7% were females. Patients with mild disability (according to self-reported Expanded Disability Status Scale [EDSS]) represented 40.4% of patients, 43.7% had moderate disability and 15.9% had severe disability. Among the 5 assessed HRQL dimensions, the ones with higher frequency of self-reported severe limitations were usual activities (15.4%), mobility (10.9%) and mood (11.5%). The least impaired dimension was self-care with 63% of patients reporting absence of limitation. The mean [SD] VAS score was 71.6 [18.9]. The mean EQ-5D index for each level of EDSS (mild, moderate or severe disability) was 0.73 [0.21], 0.49 [0.30], and 0.30 [0.34], respectively. In the multivariate analysis, variables related to patients’ characteristics were explored and the following were associated with the presence of any limitation in at least one dimension: older age, unemployment/retirement, relapses in the previous year, emergency department visits in the previous 6 months and lower educational level. CONCLUSIONS: MS adversely impact patients’ HRQL, especially with disability progression and clinical features that can be linked to more severe disease.

NEUROLOGICAL DISORDERS – Health Care Use & Policy Studies

PND17 EVALUATION OF TREATMENT PATTERNS AND CLINICAL TRIALS PUBLISHED ON PATIENTS DIAGNOSED WITH INSOMNIA: A LITERATURE UPDATE
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OBJECTIVES: To conduct a systematic review of literature in peer-reviewed journals on real world treatment patterns and clinical trials on patients diagnosed with insomnia. METHODS: A comprehensive literature search was performed using the search terms: insomnia AND clinical trial AND patients. Results of the real world treatment patterns and clinical trials conducted on patients with insomnia. Studies were identified through electronic Embase, Cochrane, Medline, and PubMed databases. Additional parameters were placed on the final search criteria to write the retrieval strategy. Results are presented using a narrative description. RESULTS: Our search yielded 1,153 articles for treatment patterns and clinical trials on patients diagnosed with insomnia from PubMed/Medline/Embase/Cochrane databases. After removing duplicates and irrelevant articles, 65 articles were included for final review. A total of 16 studies had some focus on

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