QALY gained. However, SA results indicate that the ICER drops below this threshold when most current clinical practice at the cited center is considered. Moreover, SA results suggest potential ways to optimize the current clinical pathway in order to reduce procedure costs even further.

PND54

LONG-TERM COSTS AND CONSEQUENCES OF PATIENTS WITH FAMILIAL CHYLOMICRONEMIA SYNDROME – A SIMULATION MODEL APPROACH

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BACKGROUND: Familial chylomicronemia syndrome (FCS) is a rare genetic disorder characterized by deficiency of lipoprotein lipase, causing accumulation of chylomicrons. An estimated 0.1-0.2 per 100,000 people has FCS worldwide. FCS patients present massively elevated triglyceride levels (typically >2000 mg/dL), resulting in increased risk of recurring acute pancreatitis. Standard triglyceride lowering medications are ineffective for FCS patients who choose a restrictive low fat diet to control their triglyceride. There is limited literature about long-term progression, the burden of illness or consequences of acute pancreatitis for FCS.

OBJECTIVES: To estimate long term disease progression, costs and consequences of FCS to track disease progression of a cohort of FCS patients with a mean age of 37.8 years, 60% male, and a mean triglyceride level of 2,741 mg/dL. The model projected the number of acute pancreatitis events, mortality and medical costs. Benefits of a hypothetical triglyceride reduction intervention were assessed.

RESULTS: With standard diet control, the average life expectancy of the studied cohort was estimated to be 16.45 years. These patients were expected to experience 10.16 episodes of acute pancreatitis during their lifetime, resulting in 8.07 inpatient days. The discounted lifetime cost of acute pancreatitis was projected to be $154,126 per patient. The cumulative mortality due to acute pancreatitis was estimated to be 54%.

Should an intervention reduce triglyceride levels by 50% in FCS patients, the life expectancy would be increased by 3.16 years and 7.72 fewer episodes of acute pancreatitis would occur, preventing 61.21 inpatient days and saving $13,871 in medical cost. CONCLUSIONS: FCS patients are at high risk of life-threatening and costly acute pancreatitis. Reduction in triglyceride levels has a significant impact of morbidity and mortality associated with acute pancreatitis. An effective triglyceride lowering intervention could mitigate the consequences of FCS significantly.

PND55

WORKING ABILITY AND MONETARILY VALUED PRODUCTIVITY OF PATIENTS WITH MULTIPLE SCROSIS TREATED WITH NATALIZUMAB

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OBJECTIVES: Relapsing remitting multiple sclerosis (RRMS) is a chronic inflammatory disease that represents the most common chronic neurological disorder in young adults. RRMS often leads to disability and is a major cause of reduced working capacity due to neurological diseases. Aim of this study is to investigate patients’ working productivity during treatment with natalizumab.

METHODS: RRMS-Patients treated with natalizumab for a maximum of 3 months prior to baseline were included in the study. Data was collected in the EQ-SD and a questionnaire focused on occupational status, working ability, and days absent from work at study start study, after 6 months and 12 months. Socio-demographic and clinical data were collected. Primary endpoint was work productivity, which is defined as hours worked. To estimate costs and cost offsets due to the therapy, the natalizumab was considered as available” (p < 0.0001 for all outcomes).

The analysis provides first insight into short-term persistence rates with oral DMTs. In a real-world setting, the risk of discontinuation over 6 months was lower for patients initiating fingolimod versus DMF.

PND57

MODELING THE PERSISTENCE OF DISEASE-MODIFYING DRUG TREATMENT (DMT) AND ITS INDEPENDENT DRIVERS IN FINNISH MULTIPLE SCLEROSIS (MS) PATIENTS: PARAMETRIC SURVIVAL MODELLING

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OBJECTIVES: Explore how MS DMT-persistence can be modelled, compare model’s performance and assess the independent drivers for DMT persistence. METHODS: Analysis was based on 1638 DMT uses (1.1. 1991–31.12.2010, time at risk 4009 years) in incident MS-patient register from Tampere, Vaasa and Seinäjoki regions, Finland. DMT-persistence = DMT end-day - DMT initiation day. Cox, exponential, generalised gamma, lognormal, and log-logistic survival models were used to model DMT-persistence. Models were compared based on goodness-of-fit statistics (Akaake and Bayesian information criterion).

RESULTS: Mean follow-up from first MS-symptoms and at first DMT-initiation were 13 and 6 years respectively. 73% of patients were females. Based on the data exploration of all known covariates, three DMT-persistence approaches with different interpretations, selected covariates and data needs were modelled: 1) sex, birth year, time from symptoms to DMT, age, DMT line (1st, 2nd, 3rd, 4th, 5-7th), DMT (interferon-ß1a and -ß1b, glatiramer acetate, other); 2) DMT-discontinuation reason (pregnancy plan, flu-like symptoms, injection-site reaction, ineffectiveness, antibodies, other/unknown); There was no standard survival model for DMT-persistence, and some models accommodated higher number of covariates and associated dependencies better. For approaches 1) and 2) Weibull and for 3) Comparitz model provided the best goodness-of-fit. Based on the data exploration of all known covariates, three DMT-persistence approaches with different interpretations, selected covariates and data needs were modelled: 1) sex, birth year, time from symptoms to DMT, age, DMT line (1st, 2nd, 3rd, 4th, 5-7th), DMT (interferon-ß1a and -ß1b, glatiramer acetate, other); 2) DMT-discontinuation reason (pregnancy plan, flu-like symptoms, injection-site reaction, ineffectiveness, antibodies, other/unknown); There was no standard survival model for DMT-persistence, and some models accommodated higher number of covariates and associated dependencies better. For approaches 1) and 2) Weibull and for 3) Comparitz model provided the best goodness-of-fit. Based on all three models (one per approach 1–3) with best goodness-of-fit, higher EDSS or higher age at DMT initiation, treatment line (3rd and later), and incidence of intolerable adverse events (AE) or ineffectiveness were independently associated with shorter DMT-persistence. In approach 1), flu-like symptom and injection site AEs had the highest hazard ratio for shorter DMT-persistence. Conclusions: EDSS, age, treatment line and ineffectiveness were strong predictors for DMT-persistence. Flu-like symptoms and injection site AEs showed the highest hazard for DMT-discontinuation.

PND58

PERSISTENCE WITH FINGOLIMOD VERSUS DIMETHYL FUMARATE IN PATIENTS WITH MULTIPLE SCLEROSIS: RETROSPECTIVE ANALYSIS OF US OPEN-SOURCE PHARMACY DATA

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OBJECTIVE: To compare 6-month persistence rates among patients initiating the oral multiple sclerosis (MS) disease-modifying therapies (DMTs) fingolimod and dimethyl fumarate (DMF).

METHODS: Our retrospective analysis used mail-order pharmacy claims from the US open-source LEXIS database (IMS). Patients with ≥1 fingolimod or DMF prescription index (DMT) between 01-April-2013 and 31-July-2013 were included. Patients were ≥18 years old, naive to fingolimod and DMF, and had not received multiple DMTs on the date of the first index DMT claim (index date). Prescription records were obtained from pharmacies supplying ≥2 index DMT claim between the index date and the last month of follow-up. Persistence was not assessed as time from initiating index DMT until discontinuation (gap of ≥60 days), receipt of another DMT or the end of the 6-month follow-up period. The risk of and time to index DMT discontinuation was assessed using a Cox proportional hazards model (controlling for age, gender and region) and Kaplan-Meier analysis, respectively.

RESULTS: The study included 9546 patients (fingolimod: n = 2137; DMF: n = 7409). The fingolimod cohort (based on potential 95% confidence intervals) had persistently lower odds at discontinuation compared to DMF (3.2% vs 7.3% (OR: 1.54; high 54.8% vs. intermediate/low 44.2%); satisfaction with DMT (p = 0.04; OR: 1.14, high 5.4 [SD: 1.4] vs. intermediate/low 5.2 [SD: 1.3]); or, unsatisfactory adherence to DMT (p = 0.01; OR: 1.54; high 54.8% vs. intermediate/low 15.2%). Results indicated lower odds of high adherence included longer duration on current therapy (p < 0.01; OR: 0.99, high 63.2 [SD: 53.5] months vs. intermediate/low 23.2 months) and higher persistence (p < 0.01; OR: 1.53; high 5.3% vs. intermediate/low 13.4%) or “not fill or refill a prescription” (p < 0.01; OR: 0.43; high 5.3% vs. intermediate/low 12.0%). CONCLUSIONS: Patient and provider dialogue, patient satisfaction with treatment and health plan benefit design aspects may affect DMT adherence.
PND59

PERFORMANCE IN OPEN AND CLOSED DATA SOURCES: A STUDY OF FINGOLIMOD VERSUS INTERFERON/GLATIMAR ACETATE IN PATIENTS WITH MULTIPLE SCLEROSIS

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OBJECTIVES: To compare 6-month performance rates among receiving the multiple sclerosis (MS) disease-modifying therapies (DMTs) fingolimod or interferon-glatimar acetate (IFN/GA) (index DMT), using open- and closed-source data that reflect unrestricted or continuous health care coverage, respectively. METHODS: Retrospective analyses used administrative claims and mail-order pharmacy database data (IMS PharMetrics Plan™ closed) and LRx™ open, respectively. All patients were ≥18 years old and naive to fingolimod and index DMT, had ≥1 prescription for index DMT between 01-Oct-2010 and 31-Mar-2013 and had not received another DMT within 60 days. An additional PharMetrics cohort was selected using more stringent criteria (continuous enrolment pre/post-index, MS diagnosis code). LRx prescriptions were collected from pharmacies supplying ≥1 claim for index DMT between the index date and the last month of follow-up. Persistency was defined as the time from the last prescription date to discontinuation was significantly longer for fingolimod vs IFN/GA (PharMetrics: 23.1% vs 27.2%; LRx: 26.9% vs 33.4%; p<0.0001). Risk of discontinuation was significantly lower for fingolimod vs IFN/GA (PharMetrics: 23.1% vs 27.2%; LRx: 26.9% vs 33.4%; p<0.0001). Mean age was 25.6 years (SD 6.4), 71% were female and 61% were non-white-reported migraneurs. Proportion of non-traders varied between 14% and 43% within the four questions. Respondents were willing to sacrifice median 5 and 6 hours for remaining symptom-free until the age of 65 years. More utilities for two migraines each month were U20=−0.84 (SD 0.26) and U80=−0.89 (SD 0.14), and for each week were U20=−0.79 (SD 0.27) and U80=−0.83 (SD 0.17), respectively. Self-reported migraneurs elicited higher mean utilities only for U80, (p<0.019). Responder older respondents valued higher mean utilities for U80, compared to the younger ones (p<0.04). CONCLUSIONS: Our findings provide the first time trade-off utilities on migraine associated HQoL impairment. Disutility caused by migraine ranged between 0.1 and 0.2 depending on attack frequency.

PND62

HUMANISTIC RESEARCH OUTCOMES IN MULTIPLE SCLEROSIS: A REVIEW OF THE LITERATURE FROM LATIN AMERICA

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OBJECTIVES: This research reviews the literature research humanistic outcomes related to multiple sclerosis (MS) in Latin America. METHODS: We conducted a systematic search of Medline, Embase, LILACS and ScieLO from inception through 2013 for articles reporting original research on quality of life (Qol), utility scores for states of MS, patient preference, mental health, social and emotional wellbeing in people with MS in Latin America. Adherence and related issues were not included. Outcomes were categorized into: mental domain (cognitive function, mood, physical independence, fatigue, restless legs syndrome), employment, Qol, caregiver burden, and patient preference. RESULTS: A total of 38 studies were selected for analysis. Among them, 23 addressed issues in the mental domain (9 cognitive function, 11 physical independence, 3 fatigue and 2 restless legs syndrome). One addressed impact of MS on employment, 16 Qol, 2 caregiver burden and 1 patient preference. Research was used and 56 different instruments to collect their data from 2286 patients. Compared with controls, MS patients had significantly (P<0.05) lower levels of functioning, cognition and increased presence of mental illness. All of these factors were significantly associated with decreased Qol in patients (odds ratios: 1.8). Similarly, fatigue, restless legs syndrome correlated significantly with anxiety, depression and level of mobility/functioning as well as Qol. CONCLUSIONS: As in other parts of the world, MS exerts a substantial negative impact on the lives of people with MS in Latin America. It lowers their Qol and interferes with their ability to move about, for themselves and work. Their social life is also negatively affected. The amount of literature on this subject is limited. More research in Latin America is needed to understand humanistic outcomes in these patients and management of their MS.

PND63

THE EFFECT OF INSOMNIA AND INSOMNIA TREATMENT SIDE EFFECTS ON HEALTH STATUS, WORK PRODUCTIVITY, AND HEALTH CARE RESOURCE USE

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OBJECTIVES: The aims of this study were to quantify the burden of insomnia and to quantify the association between side effect of insomnia medications and health status, work productivity, and health care resource use. METHODS: TWEEQ survey (N=5,000) for insomnia and 5EU were conducted with their respective propensity score-matched control groups on health status (SF-36v2), work productivity (WPAI-GH), and health care resource use using ANOVA tests. Among those with treated insomnia, those with and without side effects were compared on health outcomes using general linear models controlling for demographics, health history, and comorbidities. RESULTS: Compared with their respective matched control groups, patients with insomnia (n=4147) and treated insomnia (n=2860) in the SEU reported significantly worse mean health utilities (0.60 vs 0.74, 0.60 vs 0.74, respectively), greater overall work impairment (38.74% vs. 14.86%, 39.50% vs. 15.66%), and more annual medical visits (9.10 vs 4.08, 9.58 vs 4.11). Similar findings were observed in the US cohort. Among those treated for insomnia, 13.56% and 24.55% in the US and SEU, respectively, were non-adherent due to side effects. In the US, this behavior was associated with significantly worse health utilities (0.60 vs 0.46) and overall greater work impairment (57.71% vs 28.87%, among other variables all p<0.05). These relationships were not significant in the SEU. CONCLUSIONS: A significant humanistic and economic burden of insomnia was observed in both the US and SEU, and the burden remains even after treatment. Non-adherence due to side effects was common and, in the case of the US, associated with significantly poorer health outcomes.

PND64

QUALITY OF LIFE AMONG PATIENTS WITH MULTIPLE SCLEROSIS TREATED WITH PROLONGED-RELEASE FAMPIDRINE 10 MG TABLETS FOR WALKING AID

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OBJECTIVES: To evaluate the effect of prolonged-release (PR) fampidine 10 mg tablets compared to usual PR fampidine 10 mg tablets, on the quality of life among patients with multiple sclerosis (MS) with walking impairment. METHODS: The study population included 132 patients who enrolled in a 24-week randomized, double-blind, and placebo-controlled phase 2 trial (NC1705159297 of PR fampidine 10 mg tablets or placebo twice daily in multiple sites in Europe and Canada. Patients were