OBJECTIVES: Triptan medication use is contraindicated in adults with migraine who have certain cardiovascular (CV) or cerebrovascular (CV) risk factors (i.e., hypertension, diabetes, hyperlipidemia, and obesity). The objective of this study is to compare Triptan use among Migraineurs with and without cardiovascular disease (CVD) or CV risk factors such as those with diabetes, hypertension, hyperlipidemia, and obesity.

METHODS: We conducted a retrospective cross-sectional study using data from 2009 and 2011 Medical Expenditure Panel Survey (MEPS). The study sample consisted of adults with migraine aged 22–64 years and alive during the calendar years (N = 1,142). Chi-square tests were used to compare rates of Triptan use among adults with and without CVD/CV risk factors. Multiple logistic regressions were used to compare the likelihood of Triptan use among Migraineurs with and without CVD/CV risk factors. All analyses accounted for the complex survey design of the MEPS. RESULTS: Among adult Migraineurs, 36.3% with CVD/CV risk factors and 34.8% without CVD reported Triptan medication use. After controlling for gender, age, race/ethnicity, marital status, education, employment, income level, insurance and medication coverage, perceived physical and mental health, current smoking and exercise, adults with CVD/CV risk were less likely to use Triptans compared to adults without CVD/CV risk. (Adjusted Odds Ratio: 0.59, 95% Confidence Interval [0.43–0.82]). CONCLUSIONS: Although adults with CVD/CV risk were less likely to report Triptan use compared to adults without CVD/CV risk, nearly 26% of Migraineurs with CVD/CV risk reported Triptan use. The study findings suggest that Triptan medication use among adults with CVD/CV risk is not consistent with recommended clinical guidelines.

NEUROLOGICAL DISORDERS – Cost Studies

PND10 BUDGET IMPACT OF ADDING DELAYED-RELEASE DIMETHYL FUMARATE TO THE FORMULARY FOR THE TREATMENT OF RELAPSING FORMS OF MULTIPLE SCLEROSIS

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OBJECTIVES: To estimate the budget impact of adding delayed-release dimethyl fumarate, a new oral drug indicated for the treatment of relapsing forms of multiple sclerosis (MS) for a managed care formulary. The US model used in the study was developed to compare the drug-related costs of the current mix of treatments with the costs of an estimated treatment mix including delayed-release dimethyl fumarate for a managed care organization (MCO) with 1,000,000 covered lives. The number of people with relapsing forms of MS was estimated using published prevalence data. Market share of delayed-release dimethyl fumarate was assumed to increase from 10% in 2013 to 25% in 2017 taken proportionately by market share of other DMFs. Drug costs were adjusted by patient payments and dispensing fees as well as administration, monitoring and adverse event costs. Annual relapse treatment costs were estimated using the relative risk reduction of a relapse for each DMF derived using a mixed-treatment comparison analysis. A one-way sensitivity analysis was performed.

RESULTS: The estimated budget impact of adding delayed-release dimethyl fumarate to the formulary was negative for the first 3 years: in 2014, with a market share of 13.0%, the estimated budget decrease was 0.29% of the total annual costs for DMF-related and relapse treatment costs and a decrease of $0.011 per member per month (PMPM). In 2017, with a market share of 25.0%, the estimated budget decrease was 0.50% of the total annual costs and a decrease of $0.018 PMPM. Sensitivity analyses showed that the model was most sensitive to the acquisition costs of delayed-release dimethyl fumarate. CONCLUSIONS: Under model assumptions for market shares, adding delayed-release dimethyl fumarate to the MCO formulary is estimated to result in a small decrease in MCO costs for patients with relapsing forms of MS.

PND11 BUDGET IMPACT ANALYSIS OF USING AMYLOID POSITION EMISSION TOMOGRAPHY (PET) IN THE DIAGNOSIS OF ALZHEIMER’S DISEASE (AD) IN THE UNITED STATES

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OBJECTIVES: In 2013, the Amyloid Imaging Taskforce (AIT) proposed that individuals with an unexplained mild-cognitive impairment, possible AD, and early-onset dementia are potentially appropriate for amyloid PET in the diagnosis of AD and other forms of dementia. This analysis quantified the budgetary impact of using amyloid PET according to the AIT’s criteria from the US payer perspective. METHODS: An Excel-based model was developed for this analysis. The model projects the number of patients eligible for amyloid PET over a 3-year time horizon and calculates the incremental cost of using amyloid PET by considering direct medical resource uses and delaying disease progression and time to institutional care. The model was mainly populated with data from claims data analysis (Truven MarketScan® 2009–2011) and a survey of 75 dementia practitioners in the US, supplemented with peer-reviewed medical literature, public databases and assumptions estimated in 2013 dollars.

RESULTS: Assuming an uptake of 5% incrementally each year, using amyloid PET increased the total cost by about $650,000 to $1,140,000 per 1 million covered lives over 3 years (or $0.016 to $0.032 per member per month) whereas the estimated net cost was $0.009 per member per month. Sensitivity analyses were performed based on the reported 95% risk of relapse credible intervals for SC interferon beta-1a and IM interferon beta-1a. RESULTS: In a hypothetical cohort of 1000 RRM5 patients, treatment with SC interferon beta-1a is expected to result in an avoidance of 173 (2.7% of total sample) to 399 (6.3% of total sample) relapses versus IM interferon beta-1a over 2 years. Assuming a direct cost of relapse of $541, this represents a savings of $890,212 (sensitivity analysis range - $102,138 to $2,093) versus IM interferon beta-1a. CONCLUSIONS: Subcutaneous interferon beta-1a is likely to result in fewer relapses and lower direct costs of relapse versus IM interferon beta-1a over a 2-year period treatment.

PND13 POTENTIAL BUDGET IMPACT OF INTEGRATING TALIGLUCERASE ALFA THERAPY FOR GAUCHER DISEASE IN THE UNITED STATES

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OBJECTIVES: Gaucher disease (GD), a lysosomal storage disorder caused by mutations in the gene encoding the enzyme glucocerebrosidase, requires lifelong treatment with enzyme replacement therapy (ERT). Currently available ERTs include imiglucerase, taliglucerase alfa, and taliglucerase alfa. Taliglucerase alfa is the first plant cell-expressed beta-glucocerebrosidase ERT approved for adults with type 1 GD in the US. OBJECTIVES: To model the potential impact of taliglucerase alfa therapy for GD in the United States. METHODS: A hypothetical budget impact model analysis was performed, based on total estimated number of GD patients treated, treatment costs, and estimated treatment distribution of each ERT. Costs in USD ($ per 200 patient-year), were based on wholesale acquisition costs on RediPrice and Medi-Span databases. Annual costs were calculated using an average discount rate of 7%. Actual cost savings may vary with factors beyond drug acquisition costs, such as preferred-site-of-treatment programs and may not reflect actual costs paid. RESULTS: The estimated number of GD patients treated with ERT in the United States was 3,000. Drug costs for 200 units of ERT were: taliglucerase alfa-$655, taliglucerase alfa-$675, and imiglucerase-$705. Annual treatment cost was estimated at $336,440, $372,600, and $437,736 for taliglucerase alfa, taliglucerase alfa, and imiglucerase, respectively. Switching 50 patients to taliglucerase alfa, assuming same market share as national average, could save up to $46,000 USD annually. The GD treatment system could save $100,000/patient annually if patients were switched to taliglucerase alfa. A 20% increase in the number of patients receiving taliglucerase alfa could translate to an overall savings of ~$46 million annually. CONCLUSIONS: Taliglucerase alfa has the potential to provide a cost-saving alternative to other ERTs. This study was sponsored by Pfizer. Editorial support was provided by Peloton Advantage, LLC with funding from Pfizer.

PND14 SOUVENAID® FOR THE DIETARY MANAGEMENT OF MILD ALZHEIMER’S DISEASE: 5-YEAR BUDGET IMPACT ANALYSIS (BIA) FROM THE BRAZILIAN PUBLIC PAYER PERSPECTIVE (SUD) (SOUVENAID®)

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OBJECTIVES: Souvenaid® is a medical food - an enriched nutritional formula - that has the potential to provide a cost-saving alternative to other ERTs. This study was conducted to estimate the incremental cost-effectiveness of adding delayed-release dimethyl fumarate to the current treatment mix and the potential net cost savings observed for 5 years for patients with mild AD. A decision analytic model was developed to estimate the effect of Souvenaid® for mild AD according to SUS perspective. For years 1-5, using Souvenaid® increased the total cost by about $305,000 to $610,000 per 1 million covered lives over 5 years (or $0.006 to $0.012 per member per month) whereas the estimated net cost was $0.005 per member per month. Sensitivity analyses were performed based on the reported 95% risk of relapse credible intervals for SC interferon beta-1a and IM interferon beta-1a. RESULTS: In a hypothetical cohort of 1000 RRM5 patients, treatment with SC interferon beta-1a is expected to result in an avoidance of 173 (2.7% of total sample) to 399 (6.3% of total sample) relapses versus IM interferon beta-1a over 2 years. Assuming a direct cost of relapse of $541, this represents a savings of $890,212 (sensitivity analysis range - $102,138 to $2,093) versus IM interferon beta-1a. CONCLUSIONS: Subcutaneous interferon beta-1a is likely to result in fewer relapses and lower direct costs of relapse versus IM interferon beta-1a over a 2-year period treatment.