AD shows a potential budget impact of approximately Br23.9 million (US$31.8 million) for 5 consecutive years. CONCLUSIONS: The use of Souvorenaid, a new approach in the management of mild AD, can benefit approximately 100,000 patients with AD in 5 years and it is estimated to have a relatively small budget impact to SUS, since the projections of cost for the same period are Br2354 million and potential budget impact of approximately Br23.9 million.

PND15
DIRECT MEDICAL COSTS RELATED TO PARKINSON’S DISEASE
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OBJECTIVES: Parkinson’s disease is a neurodegenerative disorder with an estimated incidence of 1.00,000 cases per 100,000 habitants. In this study, we aim to estimate the direct medical costs of Parkinson’s disease. In addition, direct medical costs according to age, gender, socio-economic level, severity and educational attainment were evaluated.

METHODS: A partial economic evaluation was performed on the basis of a cohort of patients from the INNN provided information on severity, baseline characteristics and demographic data for patients with Parkinson’s disease from the INNN and the financial management. A mexican retrospective study of patients having Parkinson’s disease from the INNN provided information on severity, baseline characteristics and socio-demographic characteristics. RESULTS: Mean first semester direct medical costs per patient on Parkinson’s disease were US$2 366 in 2013. When analyzing cost distribution, no differences were found in the direct medical costs for the modality groups. In severity and gender, costs hadn’t statistical significance (p-value > 0.05). On the other hand, costs grouped socio-economic level and educational attainment were statistically different (p-value < 0.01). Finally, in the generalized linear model analysis, direct medical costs were only predicted by grouped age and educational attainment. The proportion of patient having Parkinson’s disease among school weren’t statistically significant in the model. CONCLUSIONS: The first semester direct medical costs per patient on Parkinson’s disease in this study were US$ 366 in 2013. Total direct medical costs by grouped age and educational attainment were statistically different for patients having Parkinson’s disease. In a multivariate analysis, only socio-economic level predicted a higher direct medical cost.

PND16
COST OF MANAGING PARKINSON’S DISEASE IN CHINA
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OBJECTIVES: To review studies that investigated the direct and indirect costs of care for Parkinson’s disease (PD) in China. METHODS: A structured literature review on published articles in both English and Mandarin languages was conducted. Literature search was conducted using PubMed, Cochrane, WAN FANG, and VIP databases. Articles published between 2000 and 2013 were selected. The inclusion criteria included studies on Chinese population based in China only and studies that reported direct or indirect cost of PD treatment, management as well as economic analysis. Direct medical burden of PD. Four reviewers (two for each language) independently selected and reviewed the articles. Subjective quality assessment of the selected articles were performed. Direct medical costs included cost of medication, hospitalization, rehabilitation and the use of prescribed traditional Chinese medicine; whereas indirect cost included cost of home care, home transport support equipment, supply, usage, productivity loss. RESULTS: Among articles (10 Mandarin and 1 English) were selected and reviewed qualitatively. Approximately 80% of the articles reviewed received an average grade in terms of study quality. The average direct and indirect cost of managing PD in China reported ranged from RMB 7,000 (USD 1,157) to RMB 15,000 (USD 2,487 per patient). The reported direct cost of managing PD ranged from RMB 1,600 (USD 265) to RMB 13,000 (USD 2,149); whereas the indirect cost reported ranged from RMB 2,970 (USD 491) to RMB 13,200 (USD 2,128). Seven out of 11 articles reported cost-effectiveness results. Three papers from the same authors had reported the main factors affecting the overall economic burden of PD. CONCLUSIONS: Various combination therapy involving levodopa had higher direct costs but reduced indirect costs compared to levodopa monotherapy. In general, the reported indirect cost is higher than direct cost of PD management in China.

PND17
USE OF THE INCOME MULTIPLIER EFFECT TO ACHIEVE MORE ACCURATE ESTIMATE OF THE INDIRECT BURDEN OF ALZHEIMER’S DISEASE
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OBJECTIVES: To estimate the indirect burden of Alzheimer’s disease in US. METHODS: Applying the economic concept of the multiplier effect - the degree to which a change in aggregate demand may have a greater effect on national income than the change in demand - the indirect cost of Alzheimer’s disease can provide valuable insights to the societal burden of the disease. US demographic forecasts and disease incidence rates were used to develop a Markov model for the Alzheimer’s population. RESULTS: The indirect cost for the indirect cost of Alzheimer’s were derived using key variables, such as hours spent on care per patient, severity of the illness, percentage in need of care by disease severity, and salaries. RESULTS: The model predicted that the indirect burden of Alzheimer’s will increase by 65% from 2015-2050, from $557,799 to $933,696. By 2050, the loss of productivity due to Alzheimer’s disease is expected to increase. CONCLUSIONS: The results show that the indirect costs associated with Alzheimer’s disease have a significant impact on the total burden of the disease, due in part to the multiplier effect. This novel approach highlighted the unique characteristics of Alzheimer’s disease with the particular focus on the additional costs and societal impact stemming from caring for a patient with Alzheimer’s. Future cost effectiveness studies need to consider these additional impacts when quantifying their results and potential benefit to the health care system. Approaches to modelling long-term disease impact must be expanded to consider the wide reaching societal impact of Alzheimer’s disease to the direct health care costs.

PND18
TRENDS IN ANTI-EPILEPTIC ADJUNCTIVE THERAPY UTILIZATION AND COSTS FROM 2006-2011: AN ANALYSIS OF A LARGE ADMINISTRATIVE CLAIMS DATABASE
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OBJECTIVES: To evaluate patterns of adjunctive therapy with anti-epileptic drugs (AED) and AED-specific pharmacy costs among patients with epilepsy over a six-year time period (2006-2011). METHODS: Study patients were identified from the 2006-2011 PharMetrics Plus Database. Separate patient cohorts were created for each year from 2006 to 2011. AED patterns with epilepsy were used to estimate the costs of AED therapy. Overall AED adjunctive therapy utilization was further stratified for AED generic/brand status using the following categories: adjunctive therapy with two generic AEDs, two branded AEDs, or one generic AED and one branded AED. Total pharmacy costs were identified and analyzed using the PharMetrics Plus claims database, and are expressed as the U.S. dollars.

RESULTS: Patients meeting cohort selection criteria varied for each year of analysis, ranging from 18,989 to 51,065 patients. The proportion of patient using adjunctive AED therapy stayed relatively constant over the six-year period, increasing only slightly over time (2006: 21.0%, 2007: 21.5%, 2008: 23.6%, 2009: 23.3%, 2010: 23.6%, 2011: 23.2%, P > 0.05). On the other hand, costs by grouped age, grouped socio-economic level, severity and educational attainment were statistically different (p-value < 0.01). Finally, in the generalized linear model analysis, direct medical costs were only predicted by grouped age and educational attainment. The proportion of patient having Parkinson’s disease among school weren’t statistically significant in the model. CONCLUSIONS: In this study, a doubling in the utilization of generic drugs over a six-year period was associated with a 7.6% decrease in pharmacy cost.

PND19
AGGRESSIVE NATALIZUMAB TREATMENT FOR JC VIRUS-NEGATIVE RELAPSING- REMITTING MULTIPLE SCLEROSIS? COST-EFFECTIVENESS OF FIRST-LINE VERSUS SECOND-LINE NITALIZUMAB TREATMENT
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OBJECTIVES: Because of the risk of progressive multifocal leukoencephalopathy (PML) with natalizumab, we used the PharMetrics Plus claims database to evaluate patterns of first-line vs second-line total costs, switching remitting multiple sclerosis (RRMS) patients. For those negative for JC virus antibodies, the natalizumab associated risk of PML is low. The objective was to estimate the cost-effectiveness of natalizumab after first-line natalizumab treatment (i.e., initiate glatiramer acetate (GA) then switch to natalizumab) for RRMS patients negative for anti-JC virus antibodies. METHODS: We used a cohort simulation model to estimate the costs and the incremental cost-effectiveness ratios (ICERs) of switching-remitting multiple sclerosis treatment. Model inputs included published natural history, model parameter estimates, the Expanded Disability Status Scale (EDSS), treatment effects from randomized controlled trials on disease progression and relapse rates, risk of PML, and utilities. We used the PharMetrics Plus claims database for total costs, switching and discontinuation rates and their associated costs (i.e., first-line treatment with GA then switch or discontinue). Outputs for the average patient, discounted at 3% per annum, were quality-adjusted life years (QALYs), costs in 2012 US dollars, and incremental cost-effectiveness ratios (ICERs). RESULTS: Compared to natalizumab as second-line treatment after switching from GA, first-line natalizumab treatment was associated with 0.40 incremental QALYs gained, $36,779 more in 20-year costs for an ICER of $95,150 per QALY. Compared to first-line GA treatment without switching, first-line treatment with natalizumab was associated with an ICER of $95,764 per QALY (likelihood = 0.56 that first-line natalizumab treatment was cost-effective at a willingness-to-pay of $100,000 per QALY). First-line natalizumab treatment dominated second-line natalizumab treatment when compared to GA treatment without switching through principles of extended dominance. CONCLUSIONS: Treating JC virus-negative RRMS patients with natalizumab as a first-line treatment provided better value compared to natalizumab use as a second-line agent. More aggressive treatment with natalizumab should be considered for RRMS patients who are negative for JC virus antibodies.

PND20
COST-EFFECTIVENESS OF FINGOLIMOD, TERIFLUNOMIDE, DIMETHYL FUMARATE AND INTRAMUSCULAR INTERFERON BETA-1A IN RELAPSING-REMITTING MULTIPLE SCLEROSIS
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OBJECTIVES: To compare the cost-effectiveness of fingolimod, teriflunomide, dimethyl fumarate and IM IFN-β-1a as first-line therapies in treatment of patients with Relapsing-Remitting Multiple Sclerosis (RRMS). METHODS: A Markov model was developed to simulate the disease progression and to evaluate the cost-effectiveness of disease modifying drugs from a US societal perspective. The time horizon in base...