

NAb screening, and no therapy) were included in the model. Data from pivotal clinical trials, US product labeling, and other published sources were used to estimate disease progression, relapse rates, treatment efficacy (reductions in relative risk of progression/relapse; effect of NABs on efficacy), adverse events, therapy discontinuation/switching, costs, and patient utilities. For each treatment scenario, incremental cost per QALY was assessed relative to no therapy, and each screening scenario was compared to its corresponding "no screening" scenario. **RESULTS:** Incremental cost per QALY (lifetime treatment; 3% discounting) ranged from \$75,300 (Avonex) to \$135,900 (Betaseron). NAb screening resulted in 10-year cost savings of US\$5100 per patient (Rebif) and US\$3000 (Betaseron), versus US\$800 additional cost for Avonex. **CONCLUSIONS:** Based on higher occurrence of NABs with Betaseron and Rebif, universal NAb screening of patients treated with these agents improves clinical effectiveness and is cost saving. However, NAb screening for Avonex-treated patients is cost additive due to Avonex's lower immunogenicity.

## PNL11

**HEALTH CARE COSTS FOR FLORIDA MEDICAID RECIPIENTS WITH MULTIPLE SCLEROSIS**

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**OBJECTIVE:** To assess health care costs among patients with multiple sclerosis (MS) in the Florida Medicaid program. **METHODS:** We employed a retrospective matched cohort design using administrative claims data for Florida Medicaid recipients. Patients were included if they had a diagnosis of MS between July 1, 2001 and June 30, 2002, and were eligible for Medicaid as of July 1, 2001. Those covered in capitated plans or dually eligible for Medicare and Medicaid were excluded. The comparison cohort consisted of MS-free patients matched on age, gender, and race to the MS group. The excess cost of MS (in 2002 US dollars) was estimated as the difference in mean Medicaid payments between the MS group and matched controls. Patients were followed for 12 months unless eligibility terminated earlier. **RESULTS:** A total of 951 patients with MS met cohort selection criteria, a prevalence rate of approximately 8 per 10,000 Medicaid eligibles. About one-third of these patients were dispensed glatiramer acetate or beta-interferon. MS patients and matched controls (n = 951) averaged 43 years of age; 78% were female, and 61% were white. Both cohorts had similar mean Charlson comorbidity scores and low mortality rates (<3%). Compared to their matched controls, MS patients were more likely to be hospitalized (33% vs. 20%, respectively), use nursing home services (15% vs. 3%), or use home health care services (37% vs. 11%). The annual per-patient excess cost of MS was estimated to be \$11,383 (\$20,264 vs. \$8,881 for matched controls). Long-term care accounted for 44% of the excess costs, followed by medications (28%), and hospitalizations (14%). **CONCLUSIONS:** Although MS is relatively rare in this Medicaid population, the per-patient costs are high. Long-term care costs are the largest portion of Medicaid payments, highlighting the disease burden.

## PNL12

**COST UTILITY ANALYSIS OF INTERFERON BETA-1A (AVONEX®) IN PRE-CLINICALLY DEFINITE MULTIPLE SCLEROSIS (CDMS)**

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**OBJECTIVES:** Interferon beta-1a (Avonex®) is efficacious in delaying clinically definite multiple sclerosis (CDMS) following a single demyelinating event (SDE). This study determined the cost-utility of Avonex® compared to current treatment (CT) in delaying the onset of CDMS. **METHODS:** A cost utility analysis (CUA) was performed. The outcome of interest was the quality adjusted time spent in the pre-CDMS state, termed quality adjusted monosymptomatic life years (QAMLYs) gained. A Markov model was developed with all transitional probabilities and utilities derived from the literature. Costs were reported in 2002 Canadian dollars. Costs and outcomes were discounted at 5%. A time horizon of 15 years was applied. All uncertainties were tested via univariate and multivariate sensitivity analyses. **RESULTS:** From the Ministry of Health (MoH) perspective, the total expected costs per patient over 15 years were \$202,000 and \$136,000 for Avonex® and CT, respectively. From the societal perspective, the total expected costs were \$380,000 and \$327,000, respectively. Expected QAMLYs gained were 8.47 for Avonex® and 8.18 for CT. The incremental cost of Avonex® per QAMLY gained was \$227,586 from the MoH perspective and \$189,286 from the societal perspective. The model was sensitive to the probability of progressing to CDMS, the utilities, and the analytical time horizon. **CONCLUSION:** This analysis demonstrates an improvement in the cost utility of Avonex® compared to a previously published CUA for CDMS, providing further evidence of the benefits of treatment following a SDE.

## PNL13

**A COMPARATIVE COST ANALYSIS OF VASCULAR DEMENTIA VERSUS ALZHEIMER'S DISEASE IN TAIWAN**

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**OBJECTIVE:** To compare the average direct costs for patients diagnosed with vascular dementia (VaD) versus Alzheimer's disease (AD) from the perspective of the Taiwan National Health Insurance (NHI) program. **METHODS:** Using health care claims data for NHI recipients in the Bureau of National Health Insurance Kao-Ping Branch, Taiwan, we evaluated NHI expenditures among adults 50 + years of age diagnosed with VaD (ICD-9-CM 290.4X) or AD (ICD-9-CM 331.0) between July 1, 2000 and December 31, 2002. Patient's identification period spanned from Jan 1, 2001 through Dec 31, 2002 with a 6-month baseline periods and 1-year follow up period. Direct costs estimated using NHI physician fee schedules. Health care utilization and NHI expenditures (in 2002 NHI reimbursement prices) were calculated overall and by component of care. Multivariate techniques, based on regression analyses of the log of total costs, were employed to adjust for differences between the study cohorts in sociodemographics. **RESULTS:** In total, 1450 patients met study inclusion criteria; Of the 710 were diagnosed with VaD, 41.6% were women; Of the 740 with AD, 50.7% were women. The average age for VaD was 76.25 years and 76.79 years for AD. Relative to AD patients, the burden of comorbidity was higher among VaD patients, especially for cerebrovascular disease (43.2% vs. 15.9%), but also for diabetes (5.6% vs. 3.1%) and chronic pulmonary disease (5.5% vs. 1.4%). Mean monthly costs per patient were approximately NT\$1013 higher for patients with VaD versus AD (NT\$5467 vs. 4454; p < 0.001). Most of this excess cost were attributed to higher inpatient utilization (84.8%) and mental health services (11.2%). Adjusting for difference in age, gender, and comorbid conditions between the two cohorts, mean monthly cost per patient were about NT\$1107 higher in the VaD cohort (NT\$3892 vs. 2785; p < 0.001). **CONCLUSIONS:** Relative to AD patients, VaD have sig-