DISORDERS AND RELATED HEALTH CARE UTILIZATION AND COSTS IN A STATE MEDICAID PROGRAM

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OBJECTIVE: Over the past decade, there has been a tremendous increase in the prevalence of autism spectrum disorders (ASD) in the United States. With increasing ASD prevalence, the health care utilization and costs associated with these neurodevelopmental disabilities are also expected to increase. The purpose of this study is to determine the trends in the prevalence of ASD and ASD-related health care utilization and costs among recipients enrolled in a state Medicaid program.

METHODS: A retrospective descriptive analysis of a state Medicaid fee-for-service administrative claims dataset was conducted. Medical services claims with a primary, secondary, or tertiary diagnosis code of ASD (ICD-9-CM 299.0/299.8) were extracted to determine the prevalence of ASD. Claims for psychotropic medications prescribed to recipients with ASD were then extracted using de-identified unique recipient numbers obtained from the medical services claims. Prevalence and health care utilization numbers and rates were reported by demographic categories.

RESULTS: Between 1996 and 2003, the number of recipients identified with ASD increased from 246 to 1399, respectively. In terms of age distribution, recipients in the age group 6–14 years represented the highest proportion in all the study years, with the proportion increasing from 38.6% in 1996 to 47.0% in 2003. A majority of the recipients with ASD were males, who made 69.1% of the sample in 1996 and 74.6% in 2003. A majority of the recipients with ASD were males, who made 69.1% of the sample in 1996 and 74.6% in 2003. Whites constituted a majority (>90%) with respect to ethnicity in all the study years. The increase in the prevalence of ASD was accompanied by an increase in ASD-related health care utilization and costs.

CONCLUSION: Similar to national trends, the prevalence of ASD increased considerably over the years in the state Medicaid program. In addition, the prevalence of ASD among Medicaid recipients varied by demographic characteristics. The study provides useful data to better serve the needs of this growing population.
patients with a claim for SA per 100 patient-years of treatment exposure. RESULTS: A total of 140 MRA patients were identified and matched to 420 nBZRA and 420 BZD patients by age (mean 46 years), sex (64% female), race (57% white), depression (50%), and anxiety (14%). The mean Charlson co-morbidity score was higher for MRA patients (1.4) than nBZRA or BZD patients (0.6 and 0.7, respectively, P < 0.01). The SA rate per 100 patient-years of exposure was 1.84 and 2.51 for nBZRA and BZD patients, respectively. There was no evidence of substance abuse among the MRA cohort. CONCLUSION: These initial data suggest that MRA patients were less likely to use medical services for substance abuse than nBZRA or BZD patients. However, given the small number of patients in this study, no definitive conclusions can be drawn. Additional data will be needed to confirm these findings.

**NEUROLOGICAL DISORDERS—Cost Studies**

**PND6**

**MODELING THE IMPACT OF A FIXED-DOSE COMBINATION OF SUMATRIPTAN AND NAPROXEN SODIUM ON TRIPTAN CONSUMPTION IN A US MANAGED CARE POPULATION**

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OBJECTIVE: To estimate the potential impact of a fixed-dose combination of sumatriptan 85mg and naproxen sodium 500mg (suma/nap) on triptan consumption in a United States managed care population of moderate-to-severe adult migraineurs. METHODS: A payer-perspective pharmacy budget impact model was developed using Microsoft Excel®. Dose-specific efficacy was drawn from published meta-analyses for sumatriptan, eletriptan, rizatriptan, zolmitriptan, almotriptan, and narantripan, and derived from published trials for suma/nap. Initial response rates at two hours, recurrence rates, and 24-hour sustained pain free rates were used to model mean triptans consumed per migraine episode. Nationally representative data for market share and quantity dispensed from commercial sources as well as prevalence data from the literature were combined with modeled triptan consumption to estimate the number of total annual prescriptions (TRx) filled. Probabilistic and scenario-based sensitivity analyses were used to assess model uncertainty. RESULTS: In a hypothetical plan of 1,000,000 covered lives, an estimated 14,540 moderate-to-severe adult migraineurs treated with currently available triptans filled 102,206 TRx. Of the 12 triptan doses evaluated, suma/nap had the lowest mean triptan consumption per migraine episode (1.08; CI 1.06–1.09), followed by narantripan 2.5mg (1.10; CI 1.06–1.14), eletriptan 20mg (1.14; CI 1.09–1.19), and sumatriptan 25mg (1.15; CI 1.13–1.18). After converting 8.6% of TRx share (58.3% from suma/nap and 41.7% from other triptans according to market share) to suma/nap, migraineurs filled only 100,356 TRx, a net reduction of 1,850 prescriptions [CI 1,714–1,965]. In a second scenario converting 8.6% of TRx share (100% from sumatriptan), migraineurs filled 101,253 TRx, a net reduction of 953 prescriptions [CI 811–1,076]. CONCLUSION: Treating a portion of moderate-to-severe migraineurs with suma/nap reduced triptan consumption in a hypothetical nationally representative managed care plan. Further research is required to quantify the potential economic impact of this reduction once suma/nap pricing is established.

**BUDGET IMPACT OF TRANSDERMAL ADHESIVES OF RIVASTIGMINE IN BRAZILIAN PUBLIC HEALTH SYSTEM**

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OBJECTIVE: To estimate the budget impact of switching from Rivastigmine capsules to Rivastigmine Transdermal Adhesives in Brazilian Public Health System. METHODS: A simulation model from Public Health System perspective, with a time horizon of three years was developed. In order to explore the minimum and maximum possible budget impact, two scenarios were performed. In the scenario A the patients are kept in the current treatment dosage profile using transdermal adhesive. In scenario B the patients are successfully switched to higher doses using transdermal adhesives as label and clinical studies recommendations. The capsules formulations analyzed were: 1.5 mg; 3 mg; 4.5 mg e 6 mg. The transdermal formulations evaluated were 5 cm² and 10 cm². The indication of target dose of 10 cm² rivastigmine transdermal adhesives provides efficacy similar to the highest doses of capsules was based on clinical and pharmacological trials. Data from medication unit’s dispensation were collected from public health database, ranging from October 2004 to September 2007. Cost information was collected from official reimbursement list. The rate of switching from capsules to transdermal adhesives was based on randomized controlled trial related to caregiver preference. Results were converted in US Dollars ($1,8/USD 1.00). A one-way sensitivity analysis was performed. RESULTS: In scenario A it was estimated that the government could obtain a reduction of USD$2.7 million, or 6.02% of expenses. A reduction of 37% of pharmacy dispensation activities was associated with lowest health service resource utilization. On the other hand in scenario B government expenses are 6.36% higher (USD$3.2 million) but with reduction of 31% of pharmacy dispensation activities. All scenarios are sensible to transdermal adhesives costs. CONCLUSION: Rivastigmine transdermal adhesives would be advantageous to Brazilian Public Health System providing budget savings with lower resource utilization. Although higher dosage of medication increases expenses, pharmacy dispensation activities would be lower.

**MEDICAL COSTS ASSOCIATED WITH TREATMENT CHANGE IN MULTIPLE SCLEROSIS**

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OBJECTIVE: To compare medical costs among switching, discontinuing and persisting patients on multiple sclerosis (MS) treatment. METHODS: Using the PharMetrics medical claims database, adults diagnosed with MS who initiated treatment with interferon beta (A-Avonex, B-Betaseron, R-Rebiif) or glatiramer acetate (C-Copaxone) in 1996–2005 were identified. Within each drug initiator group, patients who persisted with the index treatment, switched drugs, and discontinued MS medications, during the first 18 months after drug start were identified. Total medical costs for the 18 months following treatment switch or discontinuation, and for a randomly selected 18-month period among those who persisted, were compared using multivariate linear regression models. RESULTS: Among 6073 patients who initiated treatment, the mean age was 43 years, 78% were female, and 16% had treatment with a different MS drug prior to index drug start. At 18 months after start of the index drug, 3365 (55%) of patients persisted; 685 (11%) switched, and 2023 (33%) of patients discontinued treatment for at least 90 days. Mean medical costs over 18 months were $10,718, $8,786, and