COST-EFFECTIVENESS OF RASAGILINE VERSUS ROPINOROLE EXTENDED RELEASE IN DELAYING LEVODOPA IN THE TREATMENT OF EARLY PARKINSON’S DISEASE IN THE UNITED STATES

OBJECTIVES: Parkinson’s disease (PD) affects approximately 1 million people in the United States. A common PD treatment is levodopa; however, motor fluctuations and dyskinesias are common side effects. This model examines whether rasagiline, a once-daily irreversible monoamine oxidase type-B inhibitor for treatment of early PD, offers a cost-effective treatment strategy and delays the initiation of levodopa when compared to ropinirole extended release (ropinorole), a once-daily dopamine agonist.

METHODS: A five-year Markov model was utilized to examine the cost-effectiveness of initiating early treatment of PD with rasagiline versus ropinorole from a managed care perspective. Strategies included initial therapy with rasagiline, followed by either ropinorole or levodopa, versus initiating therapy with ropinorole, followed by levodopa. Patients could transition therapy every six months; patients on levodopa could develop dyskinesias. Rasagiline transition probabilities obtained from the TNP-1012 in Early Monotherapy for Parkinson’s Disease Outpatients (TEMPO) trial. Medical costs and utility weights were from published literature. Drug costs were from Red Book. Model outcomes included time to levodopa treatment, time to levodopa-induced dyskinesias, life-years, quality-adjusted life-years (QALY), and incremental cost per QALY. One-way and probabilistic sensitivity analyses were performed.

RESULTS: Compared to initiating treatment with ropinorole, treatment initiation with rasagiline was associated with a 4% (CI: 1% to 11%) increase in time to levodopa-induced dyskinesias (1.00 months). Rasagiline initiation was also associated with lower costs ($51660) and higher expected QALYs (0.0608) over 5 years, which is dominant. The model was most sensitive to clinical efficacy and drug costs associated with rasagiline. Compared to treatment with ropinorole and levodopa, the model concluded the use of rasagiline was cost-effective and delay treatment with levodopa and subsequent dyskinesias, compared to initiating treatment with ropinorole, and appears to be a cost-saving and clinically-effective treatment strategy.

A CONSEQUENCE ANALYSIS OF THE IMPACT OF A-RATED ANTI-EPILEPTIC Drug Switching: THE MANAGED CARE PLAN PERSPECTIVE

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OBJECTIVES: Switching between FDA-approved biogenic equivalent anti-epileptic drugs (AEDs) is associated with a higher risk of epilepsy-related events possibly owing to a narrow therapeutic range or NTI. One motivation for these switches may be to reduce the prescription costs required to manage epilepsy. Our objective was to characterize the annual cost impact of these switches from the payer perspective.

METHODS: We used data from the 2006 MarketScan® claims database. We computed total annual costs for those with an AED switch compared to those with no switch as the sum of total prescription claims for epilepsy treatment medications, generic services, and outpatient services. We utilized multiple linear regression to adjust the costs for age, gender, and diagnosis category. Incremental cost differences were calculated by the addition of an A-rated AED switch indicator. RESULTS: A cohort of 10,464 eligible epileptics was identified, with 739 experiencing at least one switch. Those with a switch were older (42.3 vs. 39.5 years), had a different regional distribution, and thus unique to those without a switch that had similar gender and seizure diagnosis characteristics. Individual costs and consequences were estimated for prescriptions: $501 (95% CI: -$170, $1181), inpatient services: $116 (95% CI: -$213, $846), and outpatient services: $214 (95% CI: $1.77, $427). Those with an A-rated switch had $1,636 in additional annual health care costs (95% CI: $96, $1977). This analysis contains limitations including a lack of adjustment for disease severity and no comparison of individual patients’ pre and post switch costs. CONCLUSIONS: Those who switched between A-rated AEDs incurred more health care costs. A policy of compulsory generic switching to reduce drug costs in this population could result in additional expenditures of $10.8 million per year.

COST OF PSEUDOMONAS AERUGINOSA IN CYSTIC FIBROSIS PATIENTS IN THE UNITED KINGDOM

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OBJECTIVES: Existing assessments of the cost of Pseudomonas Aeruginosa (PA) infections among patients with cystic fibrosis (CF) in the United Kingdom (UK) are incomplete and outdated. Therefore, we sought to determine the cost of PA infections in CF patients from a societal perspective. METHODS: We developed a prevalence-based model with data on age- and sex-specific PA prevalence, health care utilization, other (non-medical) components of care, and productivity for CF patients. Using data from the medical literature, practice guidelines, National Schedule of Reference costs, and expert panel input, the annual per capita and total UK costs were calculated. Direct medical and non-medical costs were calculated as the product of 1) the age-dependent probability that a care component is used, 2) the age-dependent number of units used, and 3) its unit price. Indirect costs were calculated based on time lost from paid labor (work productivity) and unpaid labor, i.e. providing/reciev-