OBJECTIVES: Discrete event simulation (DES) is a tool that allows for the organizational domain to be quantified within health technology assessment (HTA). This research demonstrates how DES can be used to model improved access to care for patients with medically refractory epilepsy (MRE).

METHODS: To develop the DES model from an organizational perspective, a collaborative effort is required between the clinical (iKidz) and HTA teams (PATH). We conducted an analysis of resource capacities on outputs to increase access and reduce wait times (30 days to epilepsy monitoring unit (EMU), 1.5 years surgery with invasive monitoring and 1 year for surgery without invasive monitoring). Results were validated from clinical trial data. Sensitivity analysis indicates the base case for 6-, 12- and 18-month follow-up showed respective incremental cost-utility gained versus standard therapy without LCM over two years. Results calculated were age, gender, comorbidities and severity of disease. Results were used to understand new trends in coverage of MS products. This study was undertaken to understand current trends in sales, access, and utilization management for MS products in the United States. METHODS: Sales data for MS branded products was analyzed using IMS Health 2007-2011 data. Access and utilization management trends were analyzed using preferred drug lists and coverage policies of top U.S. health plans. Total drug use trend and new trends in coverage of MS products was measured. Results of this study were conducted with pharmacy and medical directors to understand new trends in coverage of MS products. RESULTS: More than half (approximately 59%) of the branded MS products were covered by health plans as non-preferred. Epilepsy-attributable events, and overall health care utilization for the health system overall. By incorporating patient and economic outcomes, DES can be used as a platform to bridge the domains of HTA.

PND50 COMPARISON OF PATIENT CHARACTERISTICS AND HEALTH CARE UTILIZATION IN EPILEPSY PATIENTS ADDING ADJUNCTIVE LACOSAMIDE TO SODIUM CHANNEL BLOCKERS VERSUS NON-SODIUM CHANNEL BLOCKERS

Burke JP, Durgin T, Zackheim J, Simontacchi K, Gomez-Rey G

OBJECTIVES: Lacosamide is an antiepileptic drug (AED) that enhances sodium channel slow inactivation and is approved for adjunctive treatment of partial-onset seizures in adults. There have been few studies examining patient characteristics and utilization in patients receiving lacosamide with non-sodium channel blocking (nSCB) AEDs in addition to lacosamide. The objective of this study was to compare patient characteristics and health care utilization in nSCB and SCB patients prior to adding lacosamide in a real-world setting. METHODS: This was a retrospective database analysis using eligibility, medical and pharmacy claims data from a large US health care organization. For inclusion, patients had evidence of epilepsy, were continuously enrolled for 6 months prior to (pre-index) and at 6 months post-index. Pre-index lacosamide (index date), and were receiving at least one other AED (SCB or nSCB) for 60 days prior to the index date. If patients were taking ≥1 SCB, they were assigned to the SCB group. RESULTS: A total of 726 patients (382 SCB, 338 nSCB) met study criteria. Mean age was 35.7 years; 52.6% of SCB and 30.2% of nSCB patients (p=0.001) were receiving ≥2 AEDs prior to adding lacosamide. nSCB patients had higher mean pre-index Quan-Charlson (CIRS) scores [0.48(0.99) versus 0.39(0.84); p=0.001] and epilepsy-attributable events [0.56(0.99) versus 0.39(0.84); p=0.001] compared with SCB patients. Pre-index health care utilization, including inpatient [0.44(0.85) versus 0.29(0.68); p=0.006], ER [0.9(1.12) versus 0.6(1.13); p=0.015], physician office visit [0.5(1.3) versus 0.8(2.49); p=0.002], and outpatient visits [5.7(6.95) versus 4.09(5.78); p=0.001], was higher in nSCB patients compared to SCB patients. CONCLUSIONS: Prior to the addition of lacosamide, nSCB patients had greater comorbidities, epilepsy-attributable events, and overall health care utilization compared to patients using SCB. These findings suggest that nSCB patients had a more severe clinical profile compared to SCB patients prior to adding lacosamide.