Sensitivity analysis was performed to examine the data in detail.

The current study quantifies compliance and persistence rates of oral CHEs in an effort to understand the unmet therapeutic needs among patients with AD. METHODS: A claims analysis was conducted from January 2004 through December 2006 using the MedStat MarketScan database. Patients with ≥18 months of continuous insurance coverage, newly initiated on an oral CHE (i.e., no use prior to 6 months), 12 months follow up (FU), and ≥3 diagnosis of AD (ICD-9 331.0, 290.0-290.3, 294.10-294.11) were included. Compliance was estimated using medication possession ratio (MPR) during the first 12 months of FU. Persistence was defined as continuous drug use without a gap of ≥30 days between medication refills at any time after treatment initiation. Proportion of compliant patients (MPR ≥0.8) and Kaplan-Meier rates of persistence were calculated. RESULTS: Of the 4,957 study patients, mean age was 80.3 years and 58.4% were females. A total of 335 (7.8%) patients switched CHE within the first year of FU. Mean (SD) number of refills per patient was 7.5 (3.7) and mean (SD) duration of gap between refills was 20.7 (31.9) days. Mean (median) MPR and proportion of compliant patients were 0.74 (0.83) and 71%, respectively. Kaplan-Meier rates of persistence after 3, 6, 12, and 24 months were 79.0%, 60.3%, 41.0%, and 21.4%, respectively. CONCLUSIONS: Real-world data from a large cohort of AD patients initiated on CHEs, less than 50% were persistent on therapy during the first year following CHE treatment initiation. Further research is warranted to determine whether transdermal patches might improve the persistence on CHE therapy.

EXPLORATORY ANALYSES AND MODELING FOR RELATIVE COSTS OF INFANTS WITH HYDROCEPHALUS

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OBJECTIVES: Hydrocephalus is a disorder where cerebrospinal fluid (CSF) is unable to drain efficiently from the brain. Infants afflicted often present with enlarged heads, and multiple complications can occur. The standard treatment is the relatively dangerous, complicated, and expensive surgical insertion of a shunt system to drain the fluid. It is the purpose of this project to explore possible contributing variables to the presence of the disease in infants and its relative costs. METHODS: Infants one-year-old or younger afflicted with hydrocephalus and an equally sized control group were extracted from the National Inpatient Sample (NIS) provided by the Agency for Healthcare Research and Quality (AHRQ). The statistical data modeling software, SAS, was used for calculation of summary statistics, kernel density estimation, logistic and linear regression, and production of figures and charts. Exploratory data analysis was used to examine the data in detail. RESULTS: It was determined that younger infants show higher mortality rates; additionally, males are more likely to present with hydrocephalus and cost slightly more on average than females despite the distribution curves for length of stay appearing virtually identical between genders. Diagnoses and procedures expected for non-hydrocephalic infants showed negative correlation in the logistic model. The linear model showed that low birth-weight significantly impacted length of stay when also present with hydrocephalus. Additionally, affliction with hydrocephalus at admittance was strongly correlated with length of stay but not total costs, implying an impact on recovery time, but not additional treatments. CONCLUSIONS: The costs of health care in America are constantly rising, and infants often incur greater costs due to the need for sophisticated and advanced treatments. Hydrocephalus clearly exacerbates medical costs, and should warrant further study. Exploratory analysis can find important and relevant information about the disease.