INTRODUCTION

- Epilepsy is a chronic neurological disorder characterized by recurrent seizures. Approximately 2.2 to 3.3 million people in the United States have epilepsy and about 150,000 new cases are diagnosed each year.
- Approximately 50% of patients with epilepsy will have adequate seizure control with the first trial of AED monotherapy.
- Studies have shown that patients with epilepsy on initial AED therapy may switch to a different AED or progress to an adjunctive therapy (AT).
- I The economic burden of epilepsy has been estimated at $125.3 billion USD/year. It is not known whether spouses of patients with epilepsy also experience an increased health care and/or economic burden.

OBJECTIVE

- The present study sought to determine the impact of mono- or adjunctive AED therapy on spousal healthcare utilization and costs by location of care in a real-world setting.

METHODS

Data Source

- Retrospective study of de-identified claims from the HPAI-Humana Human Capital Management Systems (HCMS) database of commercial insurance.
- Represents multiple geographically diverse, US-based employers in the retail, service, manufacturing, and financial industries and includes information on more than 2 million employees and their spouses.
- Extracted from claims between January 2001 to June 30, 2014.
- The HCMS database has been used in prior research on epilepsy.
- The data were de-identified to comply with the Health Insurance Portability and Accountability Act.

Study Population

- Patients with POS were identified from any primary, secondary, or tertiary claims containing International Classification of Diseases, Ninth Revision (ICD-9) codes for localization related (focal/partial) epilepsy and epilepsy syndromes with one of the following:
  - Complex partial seizures (ICD-9 Code 345.43)
  - Simple partial seizures (ICD-9 Code 345.45)
- Employees who were employed spouses of the patient.

Exclusion criteria:
- Employees with any form of epilepsy (ICD-9 Code 345.4).
- Cohort assignment and index dates
- Patients with concurrent use of a second AED for >30 days were classified as adjunctive therapy users and assigned an index date based on their second AED prescription.
- Patients without concurrent use of a second AED were classified as monotherapy users and their initial AED prescription date was the index date for monotherapy patients.
- All employee-patient pairs had the same index date and ≥365 days of continuous eligibility post index, and were assigned to their respective cohorts.

RESULTS

- 367 employee-patient pairs were identified:
  - 238 patients (64.5%) were classified as using monotherapy.
  - 129 patients (35.1%) were classified as using adjunctive therapy.
- Descriptive information on patients and employees are shown in Table 1.

Table 1. Descriptive information for the Monotherapy and Adjunctive Therapy populations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Monotherapy (N=238)</th>
<th>Adjunctive Therapy (N=129)</th>
<th>Mean (SE) or Percent</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age, years</td>
<td>46.5 (6.87)</td>
<td>44.1 (8.7)</td>
<td>0.267</td>
<td></td>
</tr>
<tr>
<td>Gender, female</td>
<td>54.8%</td>
<td>52.8%</td>
<td>0.637</td>
<td></td>
</tr>
<tr>
<td>Full-time, percent</td>
<td>96.9%</td>
<td>95.3%</td>
<td>0.795</td>
<td></td>
</tr>
<tr>
<td>Age at index date</td>
<td>44.65 (6.8)</td>
<td>42.38 (8.9)</td>
<td>0.026</td>
<td></td>
</tr>
<tr>
<td>Age index status</td>
<td>55.4%</td>
<td>57.5%</td>
<td>0.666</td>
<td></td>
</tr>
</tbody>
</table>

- Of the patients with partial onsets:
  - Commonly used AED monotherapies and adjunctive therapies.
  - Direct prescription costs for non-epileptic drugs.
  - For the employees:
    - Direct prescription costs.
    - Direct medical claims were classified according to the location where care was performed and were assigned to an office/clinic visit, hospital outpatient, hospice, laboratory, or other.

CONCLUSIONS

- In this retrospective study, employees with spouses with partial-onset seizures, managed with adjunctive therapy (compared with monotherapy) had:
  - A greater likelihood of hospitalization
  - A significantly higher utilization of office and hospital services
  - Greater total health care costs associated with office, hospital, and other health care services (e.g., home care, ambulance, hospice)

- The findings suggest an increased burden on employees whose spouses are diagnosed with more difficult to treat epilepsy.

REFERENCES


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