(S53) COMPARISON OF MEDICAL SERVICES IN MULTIPLE SCLEROSIS PATIENTS USING FIRST-LINE THERAPIES
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Background: Disease-modifying therapies (DMTs) decrease the frequency of relapses in multiple sclerosis (MS) patients. This study examined relationships between DMTs and medical services associated with relapse. Objectives: Compare utilization of relapse-related medical services (hospitalizations, emergency room [ER] visits, or corticosteroid use + office visits associated with MS) among MS patients on first-line intramuscular (IM) or subcutaneous (SC) interferon beta-1a (IFNβ-1a), interferon beta-1b (IFNβ-1b), or glatiramer acetate (GA). Methods: This analysis used data from medical and pharmacy claims from a large US health plan. Patients were adult commercial enrollees with MS and first-line DMTs IM IFNβ-1a, SC IFNβ-1a, GA, or IFNβ-1b from 1/1/2000 to 9/30/2008. DMT initiation was the index date. Patients were continuously enrolled for 6 months pre-index and 12 to 36 months post-index. Relapse-related utilization included hospitalizations and ER visits with primary MS diagnoses (ICD-9 340) or claims for steroids (corticotrophin, dexamethasone, methylprednisolone, prednisolone, prednisone) within 7 days after outpatient visits with primary MS diagnoses. Relapse-related utilization was modeled with Cox proportional hazards regression. Covariates included DMT (reference: IM IFNβ-1a), age, gender, pre-index Charlson comorbidity score, and pre-index MS-related inpatient stay and ER visit. Results: A total of 6680 first-line patients were identified: 34.5% on IM IFNβ-1a, 13.4% on IFNβ-1b, 34.0% on GA, and 18.1% on SC IFNβ-1a. The mean (±SD) age was 42.2 (±10.1) years, and 77.4% were female. Thirty percent of patients had relapse-related utilization while on first-line DMT. Most patients with relapse-related utilization (83.0%) had steroid use; 8.3% had MS-related hospitalizations, 6.6% had MS-related ER visits; 2.1% had multiple types of utilization. IFNβ-1b patients were 16.8% more likely to have relapse-related utilization (95% confidence interval [CI], 1.018-1.340), and SC IFNβ-1a patients were 14.0% more likely (95% CI, 1.004-1.295) compared with IM IFNβ-1a patients. Conclusions: Patients on first-line IM IFNβ-1a therapy were significantly less likely to have relapse-related utilization compared with those on IFNβ-1b or SC IFNβ-1a.

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