**BACKGROUND**

- Disease-modifying therapies (DMTs) are effective in reducing relapses and slowing disability progression in relapsing forms of multiple sclerosis (MS).
- DMT adherence is associated with reduced hospitalizations and medical costs. 1, 4
- Research indicates that adherence varies by DMT type in commercially insured patients. 4
- This study investigated DMT adherence and medical resource utilization (inpatient, emergency department, and outpatient visits) and expenditures in the Texas Medicaid population.

**OBJECTIVES**

- To compare Texas Medicaid medical resource utilization and expenditures between DMT adherent and non-adherent patients with MS
- To compare medication adherence, medical resource utilization, and expenditures by DMT

**METHODS & RESULTS**

- **Data Source:** Texas Medicaid
  - Texas Medicaid provides health care to approximately 4 million low-income Texans.
  - Continuously eligible for Texas Medicaid medical and pharmacy benefits.
  - Presence of DMT claims for:
    - dimethyl fumarate
    - fingolimod
    - glatiramer acetate
    - interferon beta-1a (IM, SC)
    - interferon beta-1b
  - **Definitions**
    - **Index date:** Date of first DMT claim on or after July 1, 2010
    - **Follow-up period:** 12-month period following the index date
    - **Adherence:** Proportion of Days Covered (PDC) (out of 365 days)
    - **Continuously eligible for Texas Medicaid medical and pharmacy benefits**
    - **Inclusion criteria:**
      - 18 - 63 years of age at index
      - Presence of MS-Related Medical Costs
      - DMT adherent (PDC > 0.8)
      - DMT non-adherent (PDC < 0.8)
  - **Exclusion criteria:**
    - DMT discontinuation

- **Analyses**
  - Resource utilization and expenditures were compared between adherence groups and among DMT groups using Mann-Whitney U non-parametric tests for continuous variables and Chi-square tests for categorical variables.
  - Tests were considered significant when p<0.05.

- **Conclusions**
  - Adherent patients had significantly fewer MS-related inpatient days (1.6 vs. 2.5, p=0.021) and ED visits (0.4 vs. 0.6, p=0.021), while non-adherent patients had fewer MS-related outpatient visits (33.8 vs. 17.5, p=0.052).
  - MS-related ED (+ $63.0 vs. $40.7, p<0.05) and total medical expenditures (DMTs not included, $2,457 vs. $1,928) were significantly lower for DMT adherent patients, while MS-related outpatient expenditures were higher for adherent patients (+$347, p<0.05).

- **References**