Multiple Sclerosis | Treatment Algorithms | Claims Data Analysis | US | 2015

The availability of novel disease-modifying therapies (DMTs)—oral DMTs, Plegridy, and Lemtrada—has complicated clinical decision making and treatment choice in the management of multiple sclerosis (MS) in the United States. In addition, time-tested mainstay Copaxone (Teva Neuroscience’s glatiramer acetate) has a higher dose three-times-weekly formulation allowing for a more patient-friendly dosing regimen. With a rapidly growing number of therapeutic options, neurologists must carefully weigh the unique risks and benefits of compelling new products against the established clinical profiles of cornerstone therapies, such as the interferon beta products (, Biogen’s Avonex [IFN-beta-1a]), as they select the best course of treatment for individual patients in an increasingly complex and individualized treatment algorithm. This report uses national patient-level claims data to explore the evolving position of current DMTs in the treatment of newly diagnosed MS patients with a quantitative analysis of treatment patterns and share by line of therapy, as well as progression between lines and duration of treatment on each line. Among recently treated patients, the report quantifies patient share for each drug class and each DMT as well as each drug’s source of business compared with its competitors, and details which drugs precede others through an analysis of switch patterns. Additional analyses explore persistence and compliance by brand.

Questions Answered in This Report:

- **Newly diagnosed patients:** Approximately 30% of MS patients begin treatment with a key therapy within a year of their initial diagnosis. Which drug classes and individual products capture the most patient share in the first, second, and third lines of treatment? What percentage of treated patients progress to a second- or third-line drug within the first year of diagnosis? How long are patients on a preceding therapy before switching to second- or third-line treatment?

- **Recently treated patients:** Tecfidera and Copaxone 40 mg experienced swift uptake in recently treated prescriptions, quickly displacing Copaxone 20 mg as the brand share leader. Which specific drugs garner the most patient share for recently treated MS patients? When do patients progress from one therapy to the next in MS, and how does this pattern differ among key drugs? Are the most recently treated patients for each key brand coming from new or continuing business?

- **Pathways to key therapies:** Longitudinal claims data reveal that Copaxone 40 mg has experienced robust uptake among newly diagnosed and recently treated patients. Which
therapies have been most impacted by the launch of Copaxone 40 mg over the key periods studied? Have any other therapies experienced market growth during these periods? Has prescribing of DMTs outside of the Copaxone franchise changed with the availability of Copaxone 40 mg?

Scope:

Primary patient-level data: This report provides quantitative findings from our analysis of data covering approximately 40 million lives and provides the most representative sample of U.S. treatment practice for Medicare and commercially insured patients. Deliverables with the report include a key findings slide deck and a dashboard that can be accessed using the internet and presents claims that are between 6-12 months old at the time of publication.

Patient Sample: Patients who are continuously enrolled for the complete two-year study period must meet the following condition: at least two claims with a diagnosis code for MS (International Classification of Diseases, Ninth Revision [ICD-9] diagnostic code 34000) during the study period.

Newly diagnosed patients:
- Patient share by drug class and key products across three lines of therapy, within one year of diagnosis.
- Patient flowcharts through one year of treatment for all first-line products, including progression rates and add/switch behavior.
- Quarterly trending of patient share by line of therapy.

Recently treated patients:
- Quarterly snapshot of patient share by drug class and key products.
- Pathway to key therapy flowcharts tracking the preceding therapy patterns for all key therapies, including add/switch behavior.
- Brand source of business including share for continuing and new business (including switches and initial therapy).
- Quarterly trends in patient share for all key therapies.
- Drug persistence and compliance.

Report Details

- Pub Date: October 2015
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