Treatment Algorithms in Chronic Obstructive Pulmonary Disease

For the estimated 9 million patients diagnosed with chronic obstructive pulmonary disease (COPD) in the United States, there are multiple prescription therapies that are available for treating the associated symptoms. The Global Initiative for Chronic Obstructive Lung Disease (GOLD) treatment guidelines recommend a step-up treatment paradigm that begins with short-acting agents (short-acting beta2 agonists [SABAs], short-acting muscarinic antagonists [SAMAs], or SABA/SAMA combinations) for use as needed (, rescue therapy) in patients with mild COPD. Patients with moderate disease should also receive a long-acting bronchodilator (usually the long-acting muscarinic antagonist [LAMA] tiotropium [Boehringer Ingelheim’s Spiriva]); physicians could add a second long-acting bronchodilator (, a long-acting beta2 agonist [LABA], or switch to a LABA/LAMA or LABA/inhaled corticosteroid [ICS]) if symptoms persist. Patients with severe or very severe COPD receive combination therapy with a short-acting bronchodilator to use as needed and long-acting bronchodilators in combination with an ICS (, LABA/ICS plus LAMA). Using national patient-level claims data, this report analyzes physician adherence to the treatment guidelines by exploring the use of key therapies in the newly diagnosed and recently treated COPD patient populations. Considering newly diagnosed patients, the report provides a quantitative analysis of treatment patterns and share by line of therapy, as well as progression between lines, duration of treatment on each line, and use of concomitant treatment. With respect to recently treated patients, the report quantifies a drug’s source of business compared with its competitors and details which drugs precede others through an analysis of add-versus-switch patterns. Additional analyses explore persistency and compliance by brand.

Questions Answered in This Report:

- Newly diagnosed patients: Approximately 40% of COPD patients begin treatment with a key therapy within a year of their initial diagnosis. What percentage of these patients progress to a second- or third-line drug within the first year? Which products capture the most patient share in the first, second, and third lines of treatment? How often is combination therapy used in each line of therapy?

- Recently treated patients: Consistent with historical treatment patterns, the LABA/ICS class continues to capture the majority of recently treated patient prescriptions. Which specific drugs garner the most patient share for recently treated COPD patients? When do patients progress from one therapy to the next in COPD, and how does this pattern differ among key drugs? Are most recently treated patients with each key brand coming from new (adds/switches) or continuing business?
Pathways to key therapies: Longitudinal claims data reveal relatively consistent use patterns of key therapies among recently treated patients; use of LABA/ICSs and LAMAs for COPD increases in the later lines of therapy. Which therapies have experienced market growth or decline over the key therapy periods studied? To what extent are key therapies prescribed concomitantly to recently treated patients? What has been the impact of recently approved drugs for COPD?

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. This report is delivered as a key findings slide deck and a dashboard that can be accessed using the Internet and it presents claims that are 6-12 months old at 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 COPD (International Classification of Diseases, Ninth Revision [ICD-9] diagnostic codes 491.20, 491.21, 491.22, 491.9, 492.8, and 496) during the study period.

Quantified lines of therapy analyses show exact share of each agent in each line of therapy, including rate of progression between lines and length of time patients are on each line.

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.
- Polypharmacy and concomitant prescriptions among key acute therapies by line of therapy.
- 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, new (switches/adds), and new (initial therapy) business.
- Polypharmacy and key concomitant therapies.
- Drug persistence and compliance.
- Quarterly trends in patient share for all key therapies.
Report Details

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- Author(s): Colleen Albacker