prognos health | Case Study

Harmonized Lab Data Analysis Helps Pharma Company Fight Rare Disease

CHALLENGE

A leading pharmaceutical company with treatments for multiple rare diseases, including Hereditary Angioedema (HAE) and Gaucher Disease, desired a more effective way to identify and target eligible patients earlier in the disease cycle. Traditional methods of combing through medical and prescription claims data proved insufficient due to the latency tied to claims and the limited clinical and diagnostic detail they provide.

The pharmaceutical company needed to gain faster and deeper insight into the current state of patient health to proactively message and engage healthcare providers (HCPs) on treatment options. The end goal was to ensure that the pharmaceutical company's specific brands were top of mind with HCPs when a rare disease diagnosis was reached, and a treatment plan was outlined. In addition, the manufacturer wanted to help HCPs diagnose and treat patients earlier to improve patient outcomes and quality of life.

4.8yrs The average diagnostic delay for patients with rare diseases is 4.8 years.[1]

SOLUTION

Lab data consolidation and normalization saves time

The pharmaceutical company partnered with Prognos® Health because of its robust real-world patient data and analytics software solution that includes a comprehensive repository of harmonized lab data and test results. Given its lack of standardization, lab data is difficult, time-consuming, and sometimes impossible for pharmaceutical manufacturers to manage internally. For example, one lab source may interpret a specific lab test one way, while another source interprets the same test differently.

CHALLENGE

Traditional data analysis methods that relied solely on medical and prescription claims made identifying and targeting patients early in the disease cycle difficult.

SOLUTION

The Prognos Factor® repository of harmonized lab data and medical and prescription claims provided:

- Diagnostic specificity to identify and target rare disease patients more quickly and accurately
- Time savings and speed to data value from a single data source
- Weekly data updates for current patient insights

RESULTS

Timelier and more granular data-driven insights enabled faster identification and targeting of potential rare disease patients and treating HCPs.

Normalizing test tags and standardizing units and measures is a significant undertaking. The fact that Prognos had already harmonized data from multiple lab sources and combined it with medical and prescription claims data was considered a huge time saver. Moreover, the diagnostic specificity available in the test results and pathology notes in the Prognos repository promised to provide the pharmaceutical company with the clinical insights necessary to accurately target patients with certain medical conditions quickly.

The pharmaceutical company started by engaging with Prognos Clinical Solutions Architects to identify clinical criteria to define a precise patient profile. For HAE, the company was interested in pinpointing patients with C4 Serum results and C1 Inhibitor results within a specified range. Once these patients were identified, further information about their medical journeys could be viewed and analyzed, including treating providers, patient visits/events, current therapies, and more.

With this data, the pharmaceutical company readily identified patients that fit the profiles for specific rare disease brands and targeted treating providers with the appropriate messaging promoting these therapies — via email, digital advertising, and/or one-to-one rep engagement.

Alerts provide critical, timely data updates

To ensure the pharmaceutical company had the most current data on patient profiles of interest, the company leveraged Prognos Alerts, which provided regular data-driven updates on desired patient cohorts. Alerts notified the pharmaceutical company about:

- any new patients that fit a brand's profile
- newly diagnosed patients with specific lab results
- any new therapy intolerance

The pharmaceutical company originally received alerts on a monthly basis, but after realizing the value, desired more frequent updates. The Prognos support team made the adjustments necessary to deliver the alerts on a weekly cadence and worked closely with the pharma manufacturer's technical operations team to ensure the company's infrastructure was optimized to operationalize and deliver the updates to the field within 24 hours of receipt.

Clinical expertise supplements brand team

Additional support was also provided by Prognos' in-house clinical experts.

- The experts ensured the best clinical criteria was applied to the platform's algorithms so the patient profiles delivered were the most accurate.
- The Prognos clinical team also spent months working directly with the manufacturer's brand and medical affairs teams creating look-alike patient profiles to help the company identify and diagnose patients of interest sooner.
- Finally, Prognos' clinical team helped the manufacturer pivot its strategy as the brand progressed through the lifecycle, aligning patient populations with maturing brands and shifting patient dynamics.

RESULTS

Timeliness and granularity of lab data leads to earlier rare disease action

The harmonized lab data from Prognos Health provided timelier data and more granular clinical insights that allowed the pharmaceutical company to identify potential rare disease patients earlier and engage with HCPs sooner. Lab results are typically available after a test is completed, removing the latency that exists between when a claim is submitted and closed. Furthermore, lab data provides much deeper insight into patient health than claims alone. A claim tells you that a test was conducted and when, but the lab data gives you the specific test result, which is much more actionable, particularly in cases of rare disease. Lab data also allowed the pharmaceutical company to get much more targeted with patient profiles by isolating specific test results and ranges.

Improved data accuracy has been another benefit. False positives were historically a problem for the pharmaceutical manufacturer, leading the company to "chase ghosts" or target patients that ultimately weren't actually eligible for its therapy. The harmonization, standardization, and deduplication process that Prognos applied to its lab and claims data improved data accuracy and reduced the number of false positives.

By far, the biggest benefit to the pharmaceutical company and its account reps was the ability to intervene earlier with HCPs on rare disease diagnosis and treatment. By analyzing the medical histories of specific patient populations, the pharmaceutical company has, in some cases, identified early indicators of rare disease that prompt HCPs to consider, rule out, or confirm rare disease diagnoses sooner in the disease cycle. For example, the company tracked patient ferritin, anemia, and splenomegaly as potential indicators of Gaucher Disease and categorized these patients as pre-diagnostic leads. Efforts such as these empowered the pharmaceutical company and its account representatives to target treating providers and educate them on the diagnostic journey for a rare disease and ensure its therapy was prescribed in the process.

Sources:

[1] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5916061/

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