



USE CASE

NorstellaLinQ: Uncovering New Rare Disease Patients Using Structured and Unstructured Real-World Data

How MMIT Helped a Pharma Company Leverage Real-World Data to Develop Robust Payer Strategies

When a global pharma company wanted to build its commercial, payer, and physician education targeting strategies in preparation for its first drug launch, it reached out to MMIT for help.

Scenario

A global pharmaceutical company preparing for its first drug launch needed to quantify a rare disease patient population that was difficult to identify due to a lack of ICD-10 diagnosis codes for the condition; build its commercial, payer, and physician education and targeting strategies; identify key decision makers and HCPs to target for commercial affairs purposes; and create a robust health economics and outcomes research (HEOR) story to share with payers.

The primary challenge was the lack of a formal diagnosis code for the rare disease, making it nearly impossible to identify patients using conventional claims and structured electronic medical records (EMR) data. Without structured RWD that could reliably indicate disease presence, the company was unable to discern the patient population with high confidence.

Solution

Using NorstellaLinQ, MMIT developed a robust, unified dataset integrating U.S. open claims, closed claims, labs, and unstructured EMR clinical notes to provide comprehensive insights into the potential addressable rare disease population.

To address the lack of formal diagnostic coding, MMIT used:

- Advanced machine learning on unstructured EMR clinical notes: MMIT applied a large language model (LLM) to clinical notes for patients with the potential disease of interest. MMIT refined this model via multi-agent modeling and manual clinical review to reduce false positives and accurately identify true disease cases.
- Pattern recognition in structured data: MMIT linked patients confirmed via unstructured EMR notes with their structured data to uncover patterns and identify additional potential patients appearing within the structured data only.
- Longitudinal patient tracking: NorstellaLinQ enabled patient across open claims, structured EMR, and closed claims databases, providing granular insights into patient journeys, provider interactions, and healthcare resource utilization.

Success

With NorstellaLinQ, the client was able to pinpoint healthcare providers who frequently treated suspected and confirmed rare disease patients and allowing for a more strategic and differentiated approach to provider engagement and targeting. At the JP Morgan Healthcare Conference, the client publicly shared the quantified estimate of the rare disease population derived from MMIT's analysis. No previous studies had been able to identify these patients with high confidence, and the client integrated these insights into their press release and investor discussions, demonstrating a strong data-driven market entry strategy.

With a well-defined patient population and resource utilization insights, the client is now leveraging MMIT's data to develop robust payer strategies. The ability to track patients across closed claims played a pivotal role in negotiating reimbursement rates and demonstrating the economic value of its upcoming drug launch.

NorstellaLinQ helps clients optimize payer strategies and improve patient outcomes.

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