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PART OF REAL CHEMISTRY

INSMED

INTRODUCTION

Specialty and rare diseases have undefined patient populations who are undiagnosed or misdiagnosed, healthcare providers who are unaware of disease states and their manifestations, as well as treatment journeys that are not well-understood. IPM.ai transforms real world data into real world insights that uncover the ideal patient, their treatment journey and their healthcare ecosystem so that life sciences companies can accelerate the successful development and commercialization of life-savings therapies for specialty and rare diseases that lead to optimal patient outcomes quicker, with less risk.

THE CONDITION

Nontuberculous Mycobacterial Lung Diseases (NTM) is a progressive and chronic condition that causes severe, permanent damage to the lungs. It is caused by bacteria commonly found in aerosolized soil and water particles. While exposure to NTM bacteria is routine, it poses the greatest risk of disease to those with an underlying respiratory condition such as bronchiectasis, asthma, COPD, a weakened immune system, or simply advanced ageOf the approximately 95,000 to 115,000 people believed to suffer from NTM, the majority of the cases in the United States (80,000 to 90,000 people) are linked to a strain of bacteria known as Mycobacterium Avium Complex (MAC). Arikayce, developed by Insmed, is the first-in-class therapy approved in the United States for Treatment-Refractory MAC, which effects an estimated 12,000 to 17,000 patients in the United States.

THE CHALLENGE

Refractory MAC patients were spread across the US and typically visited multiple health care providers solely to treat their apparent respiratory issue though it was unclear which health care providers were truly diagnosing, treating, and managing their MAC. Insmed partnered with IPM.ai to quickly identify and respond to condition-specific opportunities for the use of Arikayce across the patient treatment journey.

THE SOLUTION

The IPM.ai system analyzed anonymous data for current Arikayce patients to identify key common characteristics across medical, Rx and procedure claims up until the time that the patient received Arikayce. Machine learning and artificial intelligence applied learnings from these patients against a data universe of 300M de-identified patients to uncover undiagnosed, newly diagnosed, newly treated and Refractory MAC-likely patients. IPM.ai uncovered ~10,000 look-alike patients likely to have Refractory MAC.

To discover health care providers that treated these patients, IPM.ai considered two primary heuristics. First, "Recency" attributed patients to the most recently visited specialist. If no specialist was visited, then the patient was attributed to the most recently visited pulmonologist. If no pulmonologist was visited, then the patient was attributed to their primary care physician, and so on. Second, "Frequency" attributed patients based on the highest frequency of visits to a specialist or pulmonologist. If no specialist or pulmonologist was visited, then it was attributed to a primary care physician, and so on. Finally, IPM.ai used frequency-based attribution to narrow down target health care providers to ~4,000 physicians that treated 3 out of every 4 Refractory-MAC-likely patients. Personal promotion tactics were deployed against these targeted health care providers via Medical Science Liaisons, with the remaining physicians engaged through non-personal promotional tactics, namely digital media channels.

THE OUTCOME

Insmed engaged health care providers managing Refractory MAC, empowered commercial teams to actively engage with the right set of physicians to identify Arikayce-appropriate patients, and overcame barriers to prescribing by providing education on side effects, dosing/regimens, and adherence strategies. The net result was improved outcomes as Refractory MAC patients had access to Arikayce.

About IPM.ai

IPM.ai, part of Real Chemistry, is an Insights as a Service (IaaS) provider that empowers the world's leading life sciences companies to better understand and improve the lives of patients through the development and commercialization of precision medicine for specialty and rare diseases. IPM's system of insight optimizes drug development, clinical study, product launch and commercial operations through granular-level longitudinal analytics, artificial intelligence and machine learning in conjunction with a real world data universe of over 300 million de-identified patients and 65 billion anonymized social determinants of health signals.