

# Predictive, Preventive and personalized Medicine & Molecular Diagnostics

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## Patient centricity in the era of data-driven value-based precision medicine

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Life sciences industry is undergoing a major transformation. The growing number of FDA approved targeted therapies is on one side and an increasing number of pay-for-performance deals between big pharma and payers is on the other signaling the dawn of value-based precision medicine. Big pharma has long relied on data gathered during trial site visits in randomized Controlled Clinical Trials (RCTs). The commercial divisions of Pharma and payers have relied heavily on aggregate claims data to assign value to a drug or device without aggregating and analyzing Real World Data (RWD) from patients. RWD can include Electronic Health Records (EHRs), genomics, aggregate claims data, wearables, and mobile apps and can provide key insights for R&D and commercial use cases. The existence of various third party real world data aggregators offers tremendous opportunity to biopharmaceutical companies to discover and deliver the right drugs to the right patients in the right dose at the right time at the right place. In order to adapt to this new paradigm of data-driven value based precision medicine, life science companies need access to RWD and the ability to draw insights for clinical R&D, value-based pricing negotiations, better reimbursements and targeted marketing/sales. The level of industry access to RWD and the extent of its integration in decision making is still quite low. It is critical for biopharma companies to have a RWD roadmap designed for therapeutic areas that leverage relationships with providers, payers and expertise in extracting and analyzing RWD to generate insights for Big pharma use cases. RWD insights and connected health solutions can enable the following use cases: 1) Better understanding of the target patient population for specific therapeutic area including their drug use, health outcomes such as hospitalization rates/length, adverse effects, diagnosis to precisely stratify patients. 2) Using natural language processing, machine learning and/or cognitive computing approaches on RWD to discover target patients at high risk of hospital readmission or length of hospitalization or relapse for standard of care or new drug and weekly or daily identification of new target patients who are likely to benefit from the commercial launch of a new drug. Continuously monitoring on patient's health measures remotely during trials or to improve outcomes based reimbursements.

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