TREXIN CASE STUDY

BUILDING AN MVP FOR HEATLHCARE PROVIDER ANALYTICS

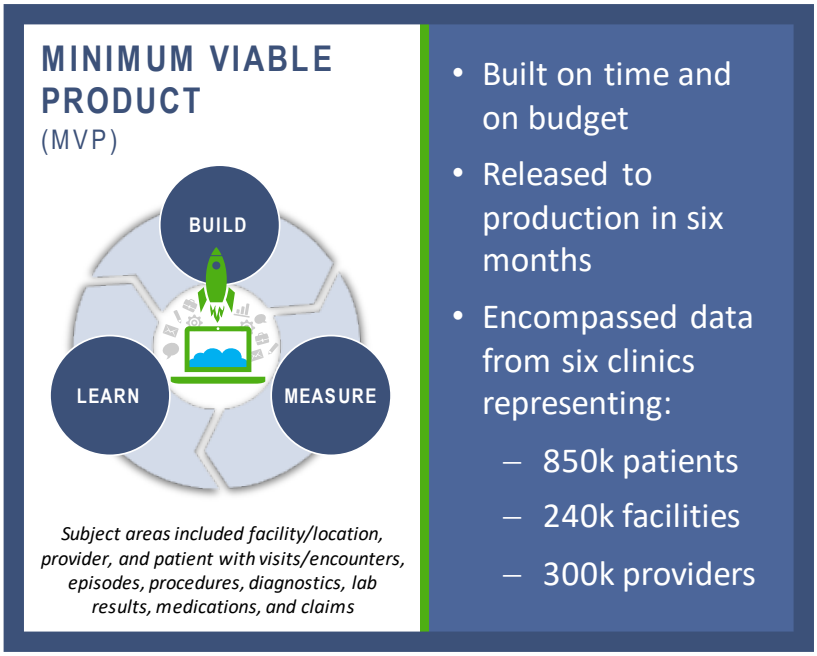
Trexin led the buildout of an integrated clinical data repository to help specialists engage in value-based care.

BUSINESS DRIVER

Our Client, an innovative startup/subsidiary of a large state medical association, previously engaged Trexin to provide strategic operational and technical advisory services for the company's first offering to help independent specialists with customized solutions more extensively benefit from value-based care activities through clinical data analytics. With development-stage funding secured and a minimum viable product (MVP) defined through extensive voice-of-the-customer sessions (VoC), the startup's CEO asked Trexin to lead all aspects of a technology product buildout by filling all development roles and effectively functioning as the early-stage startup's IT team.

APPROACH

Through the VoC discussions, it was clear that specialists had not yet had as much pressure to leverage data and analytics as primary care physicians had. However, specialists did recognize the need for basic reporting capabilities to participate in advanced payment models, which specialists struggled to do on their own because they are capital constrained, do not have clinical analysts on staff, and do not have the knowhow to develop the necessary infrastructure. Additionally, clinical data is difficult to aggregate – specialists' patients are seen in various care settings that all use different electronic health records (EHRs).



Developing the MVP solution in that context, Trexin's architectural approach was driven by two key insights: 1) The importance of bringing in data from numerous, disparate data sources, and 2) The sufficiency of initially focusing on basic reporting, which eliminated the need in the MVP for a highly modeled and fully populated traditional data warehouse. These insights led to a hybrid architecture containing a data lake (to quickly land raw data from various sources) and a simplified data warehouse (that only pulls the data needed to meet current reporting requirements).

Built within Amazon Web Services public cloud using EC2, S3, RDS, SQL Server, SSIS, PowerBI, ICD9/10, HL7, and the OMOP Common Data Model, Trexin drove development across 6 workstreams focused on infrastructure, data acquisition, data modeling, ETL, business intelligence, and change management. Data acquisition and cybersecurity represented the most significant challenges given the requirement to acquire protected health information data from various sources not directly under our control.

RESULTS

In six months, Trexin completed the MVP build on-time and on-budget, integrating clinical data from six clinics covering 850k patients, 240k facilities, and 300k providers. Subject areas included facility/location, provider, and patient with visits/encounters, episodes, procedures, diagnostics, lab results, medications, and claims. For the first time, subscribing specialists were able to manage patients through episodes of care and utilize the data warehouse for Merit-based Incentive Payment System (MIPS) reporting to participate and benefit in value-based care, and clinics were able to benchmark physicians within their clinics and broader network to measure cost and quality and identify opportunities for clinical workflow improvement.

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