

# Case Study: Healthcare Data Model for Clinical Quality Reporting

## Client Requirements

Client is a leading diagnostic services company that assists patients and physicians in making better healthcare decisions to improve healthcare outcomes.

Client needed to enhance its clinical quality measure (CQM) reporting and decision support capabilities to help healthcare providers accelerate their population health management initiatives.

CitiusTech was selected by the client to create a robust healthcare data model that can aggregate and store massive amounts of data from multiple sources including unstructured data sources. Client also leveraged CitiusTech's BI-Clinical to manage and report complex clinical quality measures (MU, HEDIS, PQRS, etc.) for compliance and to provide powerful analytics.

CitiusTech put together a team of clinical informatics specialists, healthcare BI engineers and IBM PDA professionals to conduct a detailed analysis of the client's existing data environment and to implement the solution.

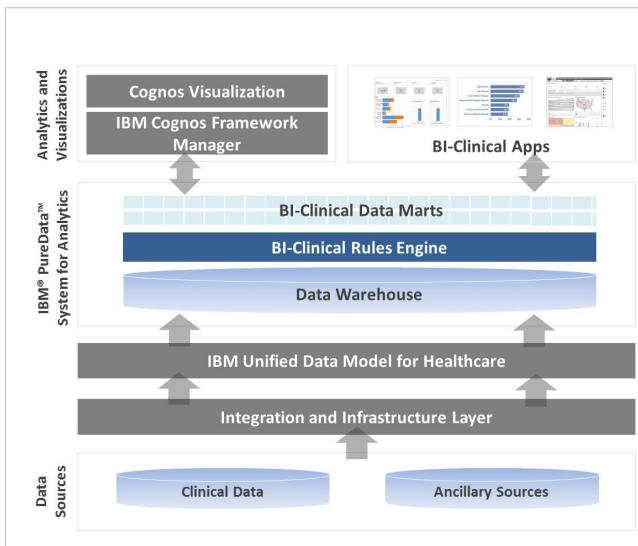
## Solution Design and Development

- Ingested and stored clinical data received in QRDA and CSV formats and from the data lake; reconciled, cleansed and standardized data
- Leveraged IBM UDMH on PDA to provide a flexible and scalable data warehouse design to store structured as well unstructured data
- Collaborated with the client's clinical team to define custom CQMs as per the clinical data available within UDMH
- Leveraged IBM PureData System for Analytics and its standards-based, pre-built advanced analytics capabilities along with configurable BI-Clinical Rules Engine to accelerate processing and calculation of CQMs for compliance
- Provided interactive visualizations and reports using Cognos
- Implemented data security at domain, organization, provider and facility level

## Value Delivered

By partnering with CitiusTech, the client was able to:

- Leverage CitiusTech's expertise with IBM UDMH and IBM PDA to build a robust, configurable data model that could process high volumes of data
- Leverage BI-Clinical to deliver quantifiable measures, spanning multiple providers, covering over 8 million lives, with 500+ active users using the solution with a projection of 1,000+ users by the end of 2017
- Develop a scalable analytics solution to support additional use cases, customized measures and future clinical quality initiatives like MU3, PQRS, MACRA (MIPS/ APM), etc.



## CitiusTech Solution

### BI-Clinical for Healthcare BI and Reporting Integrated with IBM Technology Stack

CitiusTech leveraged IBM technologies – UDMH, PureData System for Analytics (PDA), DataStage and Cognos – integrated with BI-Clinical to create a configurable, flexible and scalable data model and provide advanced analytics.

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## About BI-Clinical

BI-Clinical, CitiusTech's healthcare BI and analytics platform, demystifies clinical quality reporting by offering a range of configurable apps that cover 600+ KPIs around clinical, financial, operational and regulatory areas – the largest in the industry. BI-Clinical enables healthcare technology companies, providers, payers and life sciences organizations to generate actionable BI and build integrated clinical and financial analytics. BI-Clinical is certified for all Meaningful Use and HEDIS 2016 measures and covers a wide range of quality measures including MIPS, PQRS, ACO, CMS Star, VBP etc.

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