

How Data Technology Solutions Revolutionized Patient Care

Background

One of the largest HIV/AIDS treatment centers in the U.S tapped Carminati to help optimize their patient care processes. To best serve their patients, this treatment center aimed to holistically analyze EMR data and identify trends between two infectious diseases impacting their market – HIV and hepatitis C.

But, the process in place to accomplish this goal included manually collecting data from patient charts and using Excel spreadsheets. This process was highly labor-intensive, prone to errors and ineffective in achieving their ultimate goal – delve actionable insights from patient data to better serve their patient population and save more lives.

Approach

Collaboration & Strategizing an Efficient Solution

First, Carminati collaborated with the organization to thoroughly understand their challenges, resources and holistic goals. Then, Carminati developed the strategy for an efficient solution that would generate reliable and actionable data analytics to identify patient trends and maximize the clinic's organizational impact.

Extracting Data From Disparate Four Source Systems

Carminati implemented an ETL process to extract data from four different data source systems including HRSA CareWare Cerner EMR data, Hepatitis Fibrosan data and various spreadsheets. The data was extracted using Microsoft Azure DB sync process to maintain the highest level of security and ensure HIPAA compliance.

Creating a Centralized Data Warehouse

The extracted data needed to be seamlessly integrated within a centralized data warehouse. To accomplish this, the raw data was extracted into a staging database, transformed and then loaded into a HIPAA-secure Data Warehouse system hosted with Microsoft Azure.

Generating Meaningful & Actionable Reports

With all data in the centralized data warehouse, Carminati utilized Microsoft Power BI to generate interactive visual reports showcasing key patient data and trends specialized in HIV and hepatitis C.

Training Internal Staff To Manage Day-To-Day

With the infrastructure in place for this organization to achieve its goals, Carminati trained internal staff to optimally use the system on a day-to-day basis and continue generating reports.

Tools, Features & Reports

Data Analytics

- Power BI

Data Distribution

- Push email notifications
- Reporting interface

Reporting

- Integration Report
 - Fibroscan and HIV EMR Data
- Quality Reports
 - PCMH Reports (aligned with NCQA Standards)
 - HRSA Reports
 - Viral Load Suppression
 - Retention Rates
- Grant Related Reports
 - Data to Care (using HIV surveillance data to support HIV care continuum)

Results

The HIV/AIDS treatment center now has reliable, accurate and publishable data within a highly-secure and HIPAA-compliant centralized data warehouse and a system to generate meaningful reports. This technology solution achieves the primary goal of holistically viewing patient data and identifying HIV and hepatitis C trends, and this solution also empowers the clinic to reach new heights as an organization.

Our Client is now able to:

- **Better serve patients** with an improved ability to assess correlations between patients and diagnoses today and over time, as well as improved evaluation of intervention effectiveness
- **Maximize staff resources** with an immensely simplified workflow for patient data collection, analysis, and regulatory reporting.
- **Implement more effective prevention and awareness campaigns** due to easier identification of target demographics, which not only maximizes revenue for the organization but also saves more lives
- **Identify organizational opportunities** for improvement and future programs based on data trends
- **Become a thought leader in the healthcare space** progressively leading the way with effective and efficient systems that better serve patients and maximize resources

"This project has really helped the clinic better serve our Hep C patients! I use the now-integrated reports all the time whether to cross-analyze patients, delve deeper into their conditions, or identify candidates for clinical trials. There are so many possibilities with the data in one place; it is really exciting!"

- Senior Director of HIV Services, Hepatitis Clinic

Achieving Your Goals Starts with the Right Technology Partner

Carminati Consulting can be your go-to technology partner developing highly strategic solutions that are designed to solve the immediate challenges of today and empower your organization to be the industry leader of tomorrow.

Keaton Pellino
kpellino@carminaticonsulting.com