A HEALTHCARE CASE STUDY

- BIG DATA ANALYTICS

REGIONAL CARDIOLOGY AND INTERNAL MEDICINE FIRM DEFENDS ITSELF FROM FRAUD ALLEGATIONS BY BENCHMARKING ITSELF AGAINT OTHERS

Institute of Cardiology Excellence (ICE) is a regional healthcare provider specializing in Cardiology. ICE has 8 offices in Central Florida with state-of-the-art out patient surgical facilities, serving 24,000 patients. ICE has a superior record of patient mortality and morbidity compared to its competitors, which has been proven out by benchmarking data and customer feedback.

Executive Summary

Institute of Cardiology Excellence (ICE) is a leading healthcare provider and operates out patient surgical centers and satellite offices where it offers care to the sick. AlyData was selected to provide Advisory, Information Management and Data Science expertise and PluralSoft's Healthcare Analytics platform CareQuotient was used to develop benchmarking statistics and mine the EMR data and national and state-level claims data obtained from third parties and the Department of Health and Human Services. The project was delivered on time and on budget in a record 12 weeks (mid-Apr. to mid-Jul. 2015) by a core team of 10.

Challenges

(1) Client was sued for healthcare fraud by the Department of Justice (DOJ) based on historical claims data from 2012 and 2013.

(2) ICE had the option to pay a $10 million penalty to DOJ to settle the case or litigate it in court. ICE management decided to litigate because they felt that they hadn't committed fraud.

(3) ICE had a very short 12-week window to provide its legal team the necessary data and benchmarking data to bolster its case.

(4) Client didn't have technical expertise in Data Science or in-house Information Management capabilities .

How AlyData and Plural Soft Helped the Client

(1) **Acquired Medicare and Medicaid claims data** for Florida hospitals, National Cardiology practices and ICE's EMR systems.

(2) **Normalized and cleansed the data** and ran custom statistical analysis and data mining techniques to benchmark ICE against its peers nationwide and in Florida.

(3) Engaged ICE's legal team in Washington DC to provide **benchmark data** and key insights gleaned from the claims data.

(4) PluralSoft is deployed in the Cloud. Eliminated **IT infrastructure and support costs** for hosting the solution. Freed up IT staff to focus on value-added services.

(5) **Engaged with ICE's healthcare experts and staff** to evaluate various data sets for completeness and accuracy, before using them in models.

(6) **Automated** the data acquisition, cleansing and normalizing process so that

it can be run repeatedly against various data sets.

(7) **Documented the EMR claims process and provided recommendations** for improvement of governance and compliance.

Results, Return on Investment and Future Plans

(1) AlyData and PluralSoft were able to acquire, cleanse and analyze claims data using proprietary methodology and tools and deliver high quality benchmarks to the client against a highly aggressive time line.

(2) The benchmarking data, process improvements and documentation provided to the client, potentially saved them over $1.5 million in operational and compliance-related savings and bolstered their legal case.

(3) Helps **standardize processes**, manage claims better and implement best practices for claims processing and billing.

(4) AlyData authored a white paper based on the lessons learned from this project and it is available at – The Dark Side of Big Data.

> *"AlyData and PluralSoft were able to do wonders for us by analyzing our EMR claims data and benchmarking us against our local and national peers. This was a major accomplishment for ICE and our legal team, and helped bolster our legal case. They saved us millions in operational and legal costs." – Dr. Asad Qamar, Managing Partner, ICE*

> *"I am glad our Data Science and Information Management experts coupled with healthcare domain knowledge, resulted in a great outcome for ICE. It was a pleasure working with the ICE team and their legal representatives to address a major challenge." – Jay Zaidi, Managing Partner, AlyData*

Contacts:
AlyData – Jay Zaidi, Managing Partner (Jayzaidi@alydata.com),
PluralSoft – Ham Pasulapati, CEO (ham@pluralsoft.com).