



Protenus Healthcare Compliance Analytics: Pyxis Drug Diversion Surveillance

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Submitting:

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Project Team / Subject Matter Experts (SMEs):

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Stakeholders:

Dr. David Lubarsky - Vice Chancellor of Human Health Sciences and Chief Executive Officer

Sharalyn Rasmussen – Chief Compliance Officer

John Cook – Interim Chief Information Officer

Angelica Lewis – Director of Enterprise Applications

A simple short statement (even just one sentence) summarizing what the project does:

Protenus ingests Pyxis ADM data, Epic data including Medication Administration Record (MAR) data, Epic Audit Logs, and Human Resources data to analyze information using artificial intelligence. Protenus is able to develop a 360-degree view of every user's clinical and prescribing activity, tracking all ADM transactions and MAR information. Discrepancies between the ADM and MAR can be reviewed and analyzed. Alerts can be provided to variances or anomalies that suggest diversion or tampering.

Project narrative that describes the problem being solved and the project goals:

The primary project goal was to allow for the adequate surveillance of millions of patient records and +10k EMR users (including employees of a hosted hospital system) and allow for the efficient monitoring, identification and access to audit trail information related to medication discrepancies.

Tells how the solution has impacted customers/users:

The solution provides pharmacy and compliance oversight of all staff activities within the EMR and Pyxis related to pharmaceutical transactions. The solution allows for auditing of 100% of pharmaceutical transactions and accurately detecting diversion incidents. The AI and Machine Learning built into the platform allows the system to become 'smarter' at identifying potential breaches and areas of concerns as more data is ingested and users interact with the platform. It also allowed for a streamlined, paper less process that incorporates the pharmacy's front-end monitoring and compliance's back end investigations while providing the ability to share information across departments seamlessly.

High Level Wins:

1. Ability to focus on true policy violations and diversion incidents instead of relying on time-consuming and low-yield monthly reporting.
2. Ability to see anomalies earlier, allowing for early intervention and the ability to reduce preventable harms to patients and hospital workforce.
3. Ability to focus on actual threats and see the context around each violation to resolve cases in minutes.
4. Ability to identify and investigate cases using one system.

Highlights collaborations with other locations, departments, or teams:

This project required the collaboration of several departments: Epic Applications, Departmental Services Group, Systems Integration, Pharmacy, and the Compliance Office. From the business side, because the tool is collaborative and required workflows that would overlap Pharmacy and Compliance staff, collaboration in decision making was required by Pharmacy and the Compliance Office. We also worked closely with both of our vendors, Pyxis and Protenus to ensure that information flowed from Pharmacy to Compliance, with our end goal being a seamless continuum of surveillance.

Provides the timeframe of deployment:

The project kicked off July 3, 2019 with an aggressive deployment timeframe of 5 months. With post go live stabilization and a requirement of a minimum of 30 days of historical data included, the project wrapped January 31, 2020; 6-month total implementation timeline and under budget.

Briefly describes the technology utilized:

- Epic - Electronic Medical Record software
- Clarity – Epic Datawarehouse
- Pyxis – Medication Dispensing system
- Go Anywhere – Secure File Transfer software
- UC Path (PeopleSoft) – Human Resource system
- Informatica – Extraction, Transformation, and Loading tool