Operational Excellence, Data Driven Transformation Now Available at American Hospitals

It's Time to Get LEAN

White Paper

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To participate in a value-based care world, hospitals cannot rely on specialized personnel (even if they could find or afford them); they need access to on-demand analytics and the support to turn insights into action. Most hospital organizations encounter significant hurdles that prevent them from reaping the benefits of both retrospective and predictive data analytics. Data is not standardized or centralized and is often located in silos across the organization. Data governance is poor, lacking technological architecture and infrastructure to support comprehensive data management.

Furthermore, hospital margins generally range from one to three percent, providing very little cushion for supporting new care delivery models, absorbing financial penalties and managing metrics-based reimbursement. In addition, smaller community hospitals, suffering from all of the above, are also unable to make the investments necessary to gain the visibility they require.

Hospitals have difficulty affording or attracting employees with the right skill set—including revenue cycle management expertise to data management and data science. Capital to support significant investment in technology upgrades is scarce so the likelihood of being able to build and manage a centralized enterprise data warehouse internally is slim to none.

Highlights

- Existing infrastructure and personnel are typically not able to support the data and analytics requirements of value-based care

- Looking to the manufacturing industry, LEAN principles can help hospitals eliminate waste, optimize reimbursement, improve patient care and achieve Operational Excellence

- A better understanding of existing data is necessary to evaluate inefficiencies and determine opportunities for growth

- Taproot Cloud gives healthcare organizations fast, affordable access to advanced business intelligence and predictive analytics across all core functions, clinical, operational and financial

The Current Standard is Not Enough

Many hospitals today struggle to gain valuable insight from their existing data. Some are able to leverage basic business intelligence to make sense of past events, but thriving in the months and years ahead requires something more, a crystal ball---the ability to predict the future. Data Science and predictive analytics are the gold standard, but integrating, normalizing and analyzing data can be challenge with existing team members, and data scientists are few and far between even outside of the hospital space. Far too often hospitals are left cobbling together ad hoc reporting created from data pulled from disparate sources in an effort to view reimbursement criteria by payer, procedure, and specific reimbursement codes using pivot tables that rely on Microsoft Excel as the primary analytic tool. Personnel with limited technical skills or reimbursement expertise struggle to leverage the tools at hand in responding to challenging questions about the future of the business posed by leadership.

As a result, executive leaders are left without basic business intelligence. Even if the required data were available, rapidly taking action would still not be possible without the internal expertise necessary to make sense of it. But leadership teams are just one set

Hospital executives often know the right questions to ask but acknowledge that they don't expect that they can be answered.

of stakeholders that could benefit from better business intelligence and predictive analytics to address issues and keep the organization from slipping back to unhealthy business processes and behaviors.

Manufacturing Industry Best Practices to Transform Healthcare

Hospitals should look outside of healthcare for new ideas on how to streamline data processes, particularly to the manufacturing industry. LEAN manufacturing offers significant lessons that can be applied to healthcare. LEAN is about minimizing waste and maximizing customer value—in other words using fewer resources to creating more value.[i] Toyota perfected this concept in its Toyota Production System. LEAN focuses on keeping issues and status front and center for every business unit, creating an organization that that is led by data driven management.

So how does this translate to a hospital setting? Although applicable on many fronts, starting with the life-blood of a healthcare organization—the revenue cycle—is just good practice. This would mean constantly evaluating the level of care being delivered to patients, analyzing every aspect of revenue cycle and being aware of any wasteful processes in place. It requires understanding the root causes of inefficiencies or patient dissatisfaction and taking rapid action and then utilizing data to both analyze historic and project future impact.

CHRISTUS St. John Hospital, now known as Houston Methodist St. John Hospital, in Nassau Bay, Texas, had incredible success implementing LEAN principles and the culture of the Toyota Production System.[ii] The hospital had been hemorrhaging cash due to denials, filing issues and revenue cycle problems. A baseline of existing processes became the underpinning of a detailed plan for organizational change, a performance management system and standardized processes. Physical layout and organizational changes were made to align information and improve flow. Updates on performance were made readily available and easily visible in the form of balance scorecards, metrics discussed daily and a tracking board to post metrics.

As a result of implementing manufacturing industry best practices, financial performance at the hospital improved significantly. Bill hold dropped more than 70 percent, denials decreased to 0.51 percent of net patient revenue, accounts receivable days hit record lows and net to cash 120 days reached 93 percent. Patient satisfaction also increased, scoring in the high 90th percentile on the Press Ganey scale.

Operational Excellence for All Hospitals

A solid data warehouse and sophisticated data analytics platform are the starting points to help hospitals of all sizes apply LEAN principles and achieve Operational Excellence. They can identify waste, help reduce administrative costs and predict changes in processes that can impact patient satisfaction, just to name a few. Given the constraints faced by hospitals nationwide, WPC Healthcare has designed a solution that combines business intelligence and data science into a single, cloud-based platform. Taproot Cloud was designed to address challenges listed above and more, offering healthcare organizations fast, affordable access to advanced business intelligence and predictive analytics across all core functions, clinical, operational and financial. With more than 40 years of experience, WPC Healthcare is an expert in the

healthcare data necessary to identify, aggregate, structure and shape data in preparation for drawing meaningful insights. Taproot Cloud blends healthcare domain expertise, technology and data science creating a differentiated analytics experience that is a significant leap forward from standard business intelligence reporting suites.

The Taproot Cloud visualization layer presents data in terms of business case, workflow, or new initiative in a manner that allows for an ad hoc exploratory and descriptive analytics process. Taproot allows users to drill down into the data to quickly complete root cause analysis and answer questions posed by leadership in a rapid, fluid manner.

The application illustrates trends and patterns that, once combined with healthcare specific industry knowledge, improves the "Information IQ" of the client without requiring expensive internal programming or analytic personnel.

Hospitals need the same types of visibility and performance management systems from which the automotive industry has benefited. Operational Excellence removes silos of traditional business function organization and rearranges management around the customer/patient in terms of how they move through the health system. Taproot Cloud delivers access to these critical insights through easy to understand visualizations and rapid research capabilities. With Taproot Cloud hospitals gain access to affordable corporate performance visualizations where performance can be gauged in real-time, including data points such as cash realization, collections quality, billing quality, transaction cost per encounter and traditional metrics. The resulting impact is the ability to be proactive in managing clinical, operational and financial issues by seeking opportunities for improvement.

Taproot Cloud for Reimbursement Cycle Optimization

The Taproot Cloud reimbursement optimization module, EDI360, transforms healthcare transactional data into easy to decipher patterns and trends allowing end users to quickly uncover reimbursement leakage within existing fee-for-service contracts. EDI360 mines healthcare transactional data, electronic data interchange (EDI), consisting of submitted institutional and professional claims along with their corresponding payment remittances. Taproot Cloud offers a standardized data governance
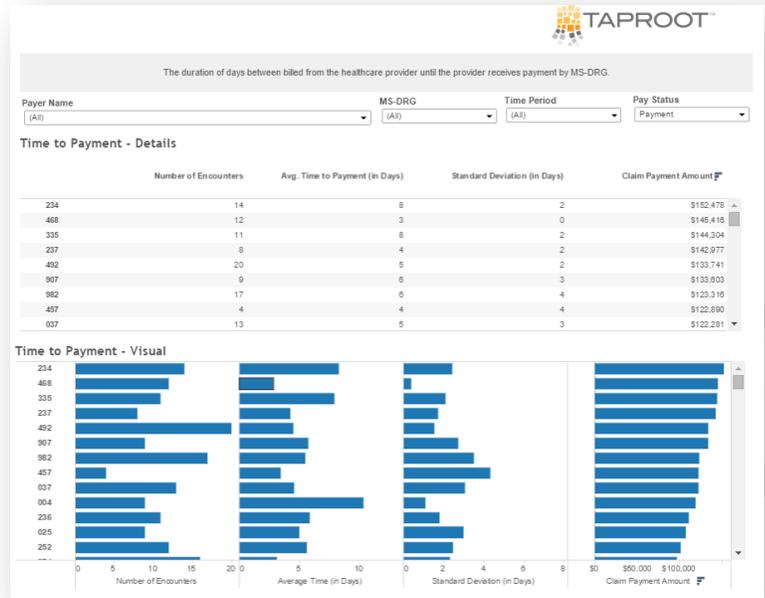
Taproot Cloud – Time to Payment Analysis

model that scales efficiently to manage datasets and groupings as they increase in volume, variety, and velocity, reducing the timeline from data gathering to insight.

By rapidly presenting insights across payer, encounter and case mixes for existing contracted services and procedures, Taproot Cloud gives healthcare organizations the insights they need to decipher reimbursement patterns. Once in place the data can be made available in real-time at the click of a button to access easy-to-read data visualizations with minimal technical skill required. In addition, built-in filters support rapid dissection of underlying information to quickly respond to questions with just a few clicks to reach metadata.

Shifting Focus From Analyzing Data to Implementing Results

Taproot Cloud aids in optimizing the effectiveness of the revenue cycle management team by reducing or eliminating previously required tasks that focus on generating numbers and reports, freeing up valuable resources to focus on implementing strategies to improve reimbursement. WPC Healthcare's 40 years of experience in healthcare data is incorporated into the Taproot Cloud platform, reducing the need for

in-house highly skilled analysts with advanced knowledge of revenue cycle functions and coding to be analyzing data. Taproot Cloud can be set up to regularly deliver relevant data and analysis, allowing high-level decisions that increase efficiencies and optimize revenue to be made. Taproot Cloud visualizations include descriptive statistics, exploratory data analysis, inferential statistics and predictive analytics presented in an intuitive manner, clearly communicating complex revenue cycle information. Taproot Cloud can help healthcare organizations achieve compliance and understand how they are performing according to regulatory standards. The platform can increase efficiency throughout the revenue cycle team by extracting, transforming, loading and analyzing data.

By streamlining roles throughout the revenue cycle, Taproot Cloud helps healthcare organizations achieve Operational Excellence by eliminating waste, optimizing revenue and, as a result, improving patient care. Taproot Cloud is a transformative tool that can allow healthcare organizations to prepare for value-based care, ensure compliance with government mandates and focus on forward-looking initiatives.

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[i] http://www.lean.org/WhatsLean/

[ii] http://www.hfma.org/Content.aspx?id=1056