Creating Financial Resiliency

_How Healthcare Providers can Leverage Advanced Analytics to Achieve Strong Financial Performance_

A Frost & Sullivan White Paper
in collaboration with GE Healthcare

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INTRODUCTION

The financial environment in which healthcare providers operate has dramatically shifted with the passage of the Patient Protection and Affordable Care Act (ACA) and the associated market transformations in coverage, care delivery and reimbursement. Importantly, providers are taking on higher levels of risk. They are managing existing fee-for-service arrangements, a growing number of risk-based arrangements, care coordination with community partners, and quality reporting. The complex and changing landscape of how care is organized, measured and reimbursed is forcing financial leaders to seek out new approaches and tools to help them meet and adapt to healthcare reform. This paper will explore some of the market dynamics driving the financial volatility in healthcare and will explore how advanced analytics, with the right IT backbone and organizational competencies, can help organizations successfully identify ways to manage revenue cycle profitability.

HEALTHCARE TRANSFORMATION DRIVES CHALLENGING FINANCIAL OPERATING ENVIRONMENT

The financial challenge is wide in scope. In the United States, rising costs and weaker reimbursement are deteriorating the average hospital operating margin. In 2014 alone, over 30% of hospitals nationwide experienced negative operating margins. Furthermore, hospital bad debt is steadily increasing as 5.93% of revenue was written off as uncollectible in the second quarter. Reductions of inpatient care volumes (due to care being delivered in lower-cost settings) and the rise of high-deductible health plans also negatively impacted organizations’ revenue mix. In 2015, The Advisory Board projects that two-thirds of acute-care hospitals in the Medicare Pay for Performance program will see a negative impact their fiscal year. To make matters even more difficult, the transition to ICD-10, while ultimately simplifying administration and reimbursement, is predicted to increase denials and the length of accounts receivable cycles as providers and payers transition to new codes and put in place unproven business processes and operating systems.

Payment model changes, the need for care coordination, requirements to meet quality metrics, and the transition to ICD-10 codes all increase financial risk in an industry that already operates on low profit margins. These industry changes require health systems and providers to address potential financial challenges head-on in order to ensure positive cash flow, operating margins and access to capital.

BREAKTHROUGH PERFORMANCE IS POSSIBLE WITH BIG DATA ANALYTICS

More and more the business of healthcare is driven by data. As care models evolve, outcomes and reimbursement are becoming more closely linked to the ambulatory environment, along with external care partners and payers. To ensure sustained financial performance, it is clear that healthcare organizations must eliminate operational silos and integrate data from clinical, financial and operational systems across the delivery network. Only by connecting disparate systems, and collecting data under one homogenous system, can providers leverage the power of analytics.

Recent advances in big data and analytics have resulted in integrated financial management and risk solutions that bring together clinical, financial, and operational data that provider organizations can use for greater visibility,

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1 American Hospital Association http://www.aha.org/research/reports/tw/chartbook/2015/table4-1.pdf
3 http://www.advisory.com/research/financial-leadership-council/at-the-margins/2015/02/mid-cycle-a-buzzword-finance-execs-should-pay-attention-to
more proactive management and smarter decision making. With big data, organizations have the ability to uncover patterns using complex algorithms and vast datasets to identify actionable insights for performance improvement. Advanced analytics take that data one step further by providing managers with greater business insight at every level of the organization. Together, these advances help enable breakthrough performance in a dynamic and changing environment.

Advanced Analytics Provide Critical Insights for Breakthrough Performance
In the New Provider Value-Based Care Environment

Health systems and providers have traditionally focused on metrics like cost to collect and days in accounts receivable (A/R) to measure and drive financial performance. While these metrics are still vital, organizations are now focusing on new forms of reimbursement, customer outcomes and quality scores. As a result, in order to drive deeper insights and more accurate decision making in the new world of value-driven care, integrating data from across the care continuum is critical. By embracing new tools and developing new competencies, successful organizations will integrate clinical information to drive measures related to quality bonuses and will incorporate financial information into a Combined (or Central) Billing Office (CBO). A CBO aligns information and processes for across the ambulatory and hospital settings, and creates a center of excellence around advanced analytics and operational insights.

A Combined Business Office can reduce operational costs and remove variability and risk across an organization through the use of common tools and more precise implementation of best practices. A CBO also enables organizations to maintain a single source of data, enabling providers to maintain and send a single statement to patients. Single statements help increase visibility of care provided, improve data quality and, subsequently, the likelihood that the patient will pay. Establishing a central repository for data from various care settings also establishes an environment where big data and analytics can be leveraged to their fullest. A CBO can help organizations create and leverage large, standardized repositories of invaluable data. From these datasets, advanced analytics tools can provide actionable insights that management can use to develop, and quickly deploy, best practices. Analysis of important trends will enable organizations to identify and act on areas essential to maintaining profitability and then more easily monitor the impact of that change.
Advanced Technologies Help Streamline Workflows

Leveraging innovations in data science, today’s advanced technologies utilize advancements in cloud, big data and analytics to spotlight trends in data that were previously hidden. With data that is now visible for insight and action, these technologies interface with key clinical, financial and operational systems to help streamline and improve administrative and clinician workflows.

Over the past few years, three key technological advances have made advanced analytics a powerful tool, one essential to measuring and acting on key data in healthcare.

1. **Data capture, storage and access:** The ability to inexpensively collect, store and integrate data from broad sources is now available to most organizations. Data is being produced at incredible rates and can be made immediately available for both simple and complex analysis.

2. **Big data and analytics:** The ability to uncover patterns using complex algorithms and vast datasets is enabling organizations to identify actionable insights for performance improvement.

3. **Cognitive computing:** Advances in machine learning and artificial intelligence (AI) enable a new level of flexibility and insights to develop algorithms. Advanced analytics solutions leverage both structured and unstructured data and allow for analysis beyond retrievable data queries and reporting to those using reasoning technologies, machine (or guided) learning and AI that can identify issues and opportunities, and even take action without human intervention. The most important attribute of these advanced technology solutions is their ability to automatically identify patterns and trends in root causes and prioritize actionable opportunities. Advanced analytics employ cutting-edge visualization technologies that vastly improve upon traditional reporting formats.

Provider organizations considering wide-scale adoption of advanced analytics should examine their existing organizational competencies in these key areas and outline a plan that prioritizes and addresses each component over time to maximize performance.
The chart below details the evolution of analytics:

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<th>Technological Advances</th>
<th>Progression of Analytics and Insights/Reporting</th>
<th>Evolution of Analytics</th>
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<tbody>
<tr>
<td>Cognitive Computing</td>
<td>Advanced analytics use power of (automated) machine learning and Artificial Intelligence (AI).</td>
<td>Prescriptive</td>
</tr>
<tr>
<td>Big Data and Analytics</td>
<td>Big data analytics analyze data to uncover patterns using computer algorithms, programming and statistical modeling techniques to find valuable and timely correlations, resulting in actionable insights. Employ context and sentiment analysis of unstructured and semi structured data. Facilitate previously siloed and inaccessible data. Find patterns and detect anomalies from multiple data streams.</td>
<td>Predictive</td>
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<td>Big Data explosion with data integration, connected devices and end points, IOT and machine to machine communication</td>
<td>Business intelligence (BI) tools typically require IT to generate pre-configured dashboards and static reports, and are not interactive in nature. They cannot combine and correlated a variety of data sets for purpose of analyzing all the data together. Best suited to provide answers to predetermined questions under structured parameters.</td>
<td>Descriptive</td>
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<tr>
<td>Structured data in relational databases</td>
<td>Excel, manipulation of data and static reporting</td>
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**The Value of Advanced Analytics in Healthcare Financial Management**

**Availability of Robust Dataset Enables New Levels of Insight**

Key healthcare stakeholders, specifically payers and providers, are sharing valuable data around claims, utilization and clinical information to drive improved care, cost and reimbursement outcomes. Additionally, data is growing at an exponential rate from multiple sources, including shared records, remote devices and consumer sources, whether a device or human input. The range of stakeholders requiring access to data insights to drive process improvement has also grown. For example, there is a growing need for access to analytics to empower evidence-based decisions at the point of service to reduce costly errors and improve the patient experience. Big data combined with advanced analytics enables users to more easily leverage this new universe of information to accelerate insights and improve performance.

**New Analytics Reporting Surpasses Intuition-driven Research**

For an analytic to be of value, the output it produces must not only be insightful but also be actionable to help solve problems, answer questions, provide guidance for better judgment, or even uncover dormant opportunities for improved performance. Analyzing data is not new practice; businesses have depended on analytics for decades in various capacities. In many cases, however, the value of the analytics depended on subject-matter experts—individuals with deep domain knowledge within internal processes, who act independently to provide insights that were often biased. Unfortunately, this type of behavior exists in many of today's organizations and diminishes the true value of analytics. Dependency on individual or historical knowledge presents notable risk to sustained, consistent financial performance, but can be retired with the right tools and organizational focus.
Across multiple industries, human insights, coupled with basic tools such as Excel, have helped improve outcomes relative to identified business challenges. Ultimately, this approach still depends on decentralized human intuition, which fundamentally undermines the value of advanced technologies. As technology advances to better enable the distribution and contextualization of system knowledge, so, too, will organizational alignment around new technology.

**Action-oriented Insights Enable the Best Use of Human Capital**

Human intervention and analysis will still be required as key components to successful application of advanced technology. As subject-matter experts are empowered to apply analytics to a broader spectrum of business issues and data sets, human intervention will shift from searching for problems to confirming or nullifying hypotheses and translating the insight from advanced tools into process-level improvement. In today's financial environment, the absence of wide-scale use of advanced technologies means too much human capital is being consumed looking for trends that may not even exist or have significant value to their organizations. High-powered statistical algorithms and advanced analytics help remove the variability and cost of human-based research by eliminating cumbersome manual processes. Going forward, resources can be redeployed to more cognitive and high-value initiatives, such as solving complex organizational problems, redesigning legacy workflow, talent management or contracting.

**Driving Real Performance Results**

With insights more readily accessible, decision makers across the continuum of care can now transform insight into action. By deploying intelligent work lists for staff, customizable alerts for directors and dynamic dashboards for executives, organizations can pinpoint and monitor key areas for financial improvement and improve the bottom line.

**The Role of Enterprise-level Advanced Analytics for Optimized Financial Management**

Providers today are managing key encounters, complex stakeholder and system interactions that impact care and financial performance across large multi-dimensional organizations; they are also consistently expected to do more with less. Advanced analytics capabilities, when applied across financial and clinical systems, can provide executives and managers with extraordinary insights into people, process and technology opportunities to help ensure that an entity is well-positioned to withstand future financial challenges. Deploying advanced analytics also helps maximize resource deployment, reducing errors and removing risk, while increasing capacity and empowering organizations to establish new competencies.
Revenue cycle management (RCM) has historically been an opportunity to implement potentially profitable changes in response to changing market dynamics. The opportunity to have a profound impact on financial performance by improving revenue cycle management multiplies with advanced technologies. Throughout the reimbursement cycle, advanced analytics can identify exact challenges across broad time horizons and inform and even implement required fixes. From prior authorizations to coding challenges of ICD-10, advanced analytics can be deployed in key areas of the revenue cycle—pre-service, point of service and post-service—to drastically reduce waste, optimize processes, and enforce best practices. The revenue cycle is fluid, extremely measurable, produces a wealth of transactional data and requires a lot of manual intervention, making it a perfect target for advanced analytics.
Managing payer claims denials is a common problem facing RCM systems. The process of working denials is overwhelming and is people and process heavy, making it a perfect opportunity for advanced analytics. Today, over 90% of a traditional claims denials workflow might be spent on research. Deploying costly human resources to research trends, or to look for common themes about why claims were denied, offers no certainty that the results will have favorable business results. Re-working a denied claim costs roughly $25 per re-claim, yet actionable data about which claims should be re-worked and how to work them more effectively is not widely used. To make matters worse, denied claims translate into lost revenue. In a study by The Advisory Board, avoidable claims denials written off to bad debt represented 2% of net patient revenue.4 By applying advanced analytics that go beyond traditional business intelligence, organizations can now preemptively identify issues that lead to denials by frequency and value. With the ability to easily identify, group and prioritize their largest denials-related issues through root cause factor analysis, managers can make proactive and informed changes once to accelerate payment and reduce wasteful behavior.

Creating a Successful Organization Competency in Advanced Analytics

The insights delivered by analytics solutions at any level of maturity (reports, business intelligence or advanced analytics) are only as good as the actionable remedies they provide for users. Advanced analytics is no exception to this rule, and in fact may require the highest level of organizational focus when implementing new strategies focused around them. The level of insight delivered by advanced analytics fundamentally changes business processes and therefore requires training, planning and organizational commitment. Unlike targeted reports or queries that depend on domain knowledge to develop and deploy, or those that focus on a single element such as payer or billing department, advanced analytics deploy statistical algorithms that do not include human intervention. Removing human intervention from legacy processes has a profound impact on organizational structure, as well as the application of data and insights. By removing debate over report construction, rule application, workflow nuances, bias among report owners and data credibility, organizational focus shifts from finding talent to develop data analysis and reporting to training directors and managers on how to be more strategic with data-driven decisions that will have greater impact, improving the financial performance.

Deploying an advanced analytics-powered strategy demands forethought and control. Making important business decisions and redeploying resources based on analytics is often a departure from existing practices and corporate culture, and may be met with resistance. It is critically important that an internal champion or core team with the responsibility to make data-driven decisions is identified and that application and business process workflows are in place to leverage new advanced insights. Despite potential push back, the commitment to building new organizational strengths powered by advanced analytics will pay off. Solving important problems, reducing mindless tasks, identifying opportunities to improve revenue and reduce costs, and learning about new technology all have the ability to empower teams and significantly improve morale. The enthusiasm generated by advanced technology can be as powerful as the insights they generate. Retaining, developing and attracting top talent to manage advanced technologies goes beyond just improving financial performance to help organizations ensure a better patient experience and to create sustainable competitive advantage within a turbulent environment.

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4 Benchmarking Revenue Cycle Performance, results from the 2013 National Survey of Hospital Revenue Cycle Operations, The Advisory Board
THE LAST WORD

The future financial operating environment of healthcare providers will remain complex and will require excellence in outcomes, cost and risk management. Healthcare entities that leverage advanced technologies for insights-enabled intelligence, and then redesign their workflows and processes around them, will be those who generate greater revenues and performance results, attract top healthcare professionals and more patients, and deliver the performance needed to ensure future investment. Advanced analytics enable leaders to optimize their financial performance and continually improve and adapt to market dynamics to create competitive advantage. Enabling advanced levels of business intelligence can help organizations improve financial operating performance, care outcomes and patient experience. Leaders that are committed to adopting a strategy powered by advanced analytics capabilities are therefore fundamentally better positioned to improve financial and clinical performance, despite the market pressures they face today, and to strengthen competitiveness for continued success in the future.
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