

# Performance Strategies



Using Analytics to Drive a Culture of Excellence

Vol. 1, Issue 1, 2007

## The Power of Performance Strategies



By Pamela Pure, President  
McKesson Technology Solutions

As a senior healthcare leader, you're working to drive success in the face of myriad pressures — from consumer-directed healthcare and the growing demand for transparency to capacity challenges, regulatory compliance and physician alignment. Never before has it been more important to draw on best practices in healthcare and beyond to achieve peak performance, both clinically and financially.

### Best Practices Quarterly for Senior Healthcare Executives

McKesson is pleased to bring you some of those best practices with *Performance Strategies*, our quarterly newsletter for senior healthcare executives. Designed to be a quick read, each issue tackles a current healthcare challenge with insights, best practices and strategies drawn from your peers, an industry expert and a McKesson strategist. Results scorecards show outcomes achieved by organizations using IT to automate, measure and connect healthcare delivery. You'll learn about upcoming events and find links to online resources for more on the topic.

### Premier Issue – Using Analytics Gives You the Power to Perform

With this premier issue, you'll learn how using analytics can give your organization the power to perform and achieve demonstrable results.

- **Lehigh Valley Hospital and Health Network** shares how it improved capacity by reducing bed turnaround time. LVHNN used analytics to identify inefficiencies and monitor the effects of process changes. [Article on Page 2](#)
- **Tom Davenport**, a widely respected author, explains how companies who compete on analytics “wring every last drop of value from their data.” [Article on Page 4](#)
- **Duncan James**, McKesson group president of Health Systems Solutions, explains how “New School” performance analytics tools can improve your quality efforts and your bottom line. [Article on Page 6](#)

The leaders in healthcare are increasingly using IT to not only improve quality and cost, but also to stake a stronger competitive position in the market. Better use of analytics, combined with broad adoption of clinical IT and connectivity, can lead to better outcomes, increased efficiency and regulatory compliance, and greater patient satisfaction.

At McKesson, we value your success, whether you are just starting your IT journey or you're already well on your way to “reinventing” healthcare for your local market.

We trust you'll find this newsletter valuable. Be sure to use the Feedback option to send us your comments.

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## Using Analytics to Manage Hospital Throughput and Capacity



*David Richardson, MD, FACEP  
Associate Vice-Chair, Department of Emergency Medicine  
Lehigh Valley Hospital and Health Network, Allentown, Pa.*



What healthcare organization doesn't want to meet its goal for admissions? Every hospital drives toward meeting its goal, yet capacity constraints make it a challenge. In late 2006 and early 2007, Lehigh Valley Hospital and Health Network (LVHNN), in Allentown, Pa., was faced with increased demand for services and an inability to manage its capacity. Operating rooms were put on hold and transfer patients were being turned away — yet admissions were below its goal.

The emergency department (ED) is a major source of hospital admissions and was on diversion to ambulances between 170 and 220 hours a month. Ambulance diversion, commonly used by medical facilities when their hospital is perceived to have exceeded its capacity to care for patients<sup>1</sup>, has been labeled an ED problem. However with the loss of 1-1.5 admissions for every hour of ambulance diversion, it clearly has a significant impact on revenue, patient safety and caregiver satisfaction as well as meeting the goal for admissions.

By employing analytics, LVHNN has been able to monitor the success of multiple process changes that are designed to increase hospital and ED virtual capacity by decreasing hospital and ED patient length of stay.

### **LVHNN Executives Drive Improvement**

Recognizing the systemic nature of the problem, executives at LVHNN launched a project to identify throughput inefficiencies to find ways to expand capacity. Named "Turnaround Time Committee," the initiative enlisted teams of healthcare professionals to evaluate dozens of possible process changes that could improve throughput.

Dashboards and scorecards are being used to monitor the success of these process changes. Using these tools, executives can drill down into time-stamped activity data to examine where and when process inefficiencies are occurring and to measure the impact on capacity, cost and quality. The data can be customized and filtered to support individual preferences, making it easy to measure the success or failure of various changes. At LVHNN, this customization has helped drive adoption to more than 1,400 users who have daily access to meaningful scorecards. If metric goals are not achieved, an automatic e-mail is sent to appropriate stakeholders to actively monitor process changes.

For example, the time from discharge order to the time that the patient is discharged is tracked for each one of the facilities. The goal is to discharge patients within 2 hours of the discharge order. Using analytics, we are able to drill down to discharge orders placed before 11 a.m., between 11 a.m. and 2 p.m., and after 2 p.m.; and also see discharge orders by physician, physician group, and hospital site. We can use this information to provide resources to physicians to meet the goal of discharging patients before 11 a.m. so that the bed can be freed for the next admission.

We've achieved significant results since the inception of this ongoing program:

- Reduced ambulance diversions by more than 80 percent
- Reduced ED wait times by 23.5 percent
- Reduced inpatient bed turnaround time from an average of 210 minutes per bed to an average of 60 minutes per bed
- Increased admissions to meet the goal for admissions

**CONTINUED ON PAGE 3**

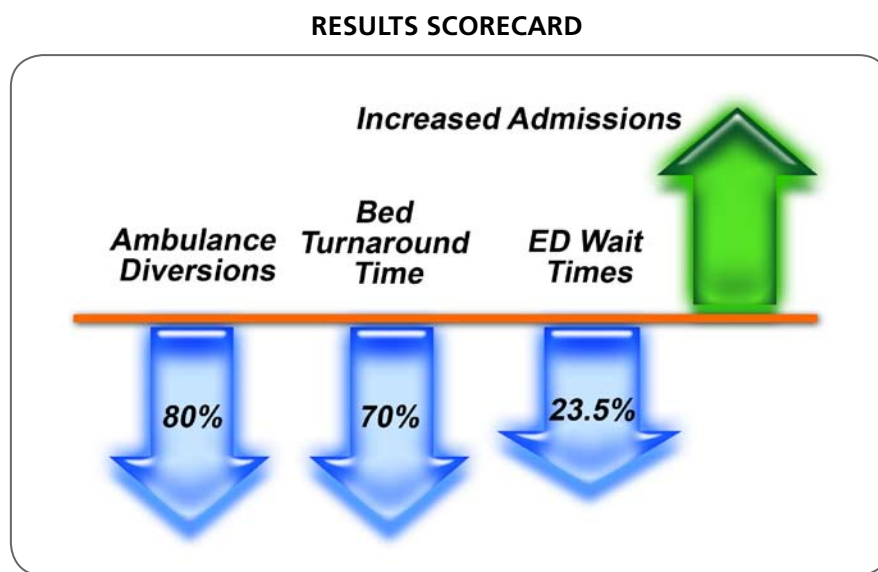
## Using Analytics to Manage Hospital Throughput and Capacity (Cont.)

### Analytics is Important in Changing Behavior

Analytics is an important element of sustainable performance improvement. Achieving these results required significant clinical process redesign and behavioral change. Faced with changing the way they have practiced for perhaps decades, clinicians may experience something akin to the five stages of grief — first there is denial, anger, bargaining, depression and finally acceptance. Providing your stakeholders with timely, accurate, relevant and quantifiable data is one of the key factors in changing behavior. Once the results of making those changes become evident — in this case with increasing admissions and decreasing diversions — you will achieve buy-in and acceptance and ultimately drive higher performance.

<sup>1</sup>Pham, et al., "The Effects of Ambulance Diversion: A Comprehensive Review," Academic Emergency Medicine. 13(11):1220-1227.

Dr. David Richardson spoke at McKesson's recent Executive Retreat for senior healthcare executives. Dr. Richardson was part of a panel discussion, "Gaining a Competitive Edge with the Power of Analytics," which was led by Tom Davenport, the industry expert featured in this issue of Performance Strategies.



Using analytics to identify inefficiencies, LVHHN provides resources to physicians to meet the goal of discharging patients before 11 a.m. so that the bed can be freed for the next admission.

## Learn More

[Performance Improvement: A "Left Brain Meets Right Brain" Approach \(HFMA, Dec. 2006\)](#)

[Removing the Blinders in Surgical Quality Management \(HFMA\) HHN Most Wired](#)

[Clinical Utilization Reporting: Improve Accuracy](#)

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## Competing on Analytics



*By Thomas H. Davenport  
Author, professor, lecturer, consultant*

Organizations have invested millions of dollars in systems that capture data from every conceivable source. Enterprise resource planning, customer relationship management, point-of-sale and other systems ensure that no transaction or other significant exchange occurs without leaving a mark. But to compete on that information, your organization must present it in standard formats, integrate it, store it in a data warehouse, and make it easily accessible to anyone and everyone. The popularity of competing on analytics is partly in response to the emergence of integrated packages of these tools. Using them, your organization can become an “analytics competitor” that is able to wring every last drop of value from your data.

To identify characteristics shared by analytics competitors, I and two of my colleagues studied 32 organizations that have made a commitment to quantitative, fact-based analysis. We found three key attributes:

- 1. Widespread use of modeling and optimization.** Any company can generate simple statistics about its business. Analytics competitors profile their customers, optimize their supply chains and create complex models of how their operational costs relate to their financial performance.
- 2. An enterprise approach.** In traditional companies, “business intelligence” is generally managed by departments, each of which selects its own tools (often error-prone spreadsheets), controls its own data warehouses and trains its own people. Analytics competitors field centralized groups to ensure that critical data and other resources are well managed and that different parts of the organization can share data easily, with consistent formats, definitions and standards.
- 3. Senior executive advocates.** A companywide embrace of analytics impels changes in culture, processes, behavior and skills for many employees. Like any major transition, it requires leadership from executives at the very top who have a passion for the quantitative approach. A background in statistics isn’t necessary, but leaders must understand the theory behind various quantitative methods so that they recognize those methods’ limitations — which factors are being weighed and which ones aren’t. As Gary Loveman, CEO of Harrah’s, frequently puts it, “Do we think this is true? Or do we know?”

### How Healthcare Organizations Can Use Metrics

Healthcare organizations should follow the casino-giant’s litmus test for making decisions. One healthcare organization, Cardinal Health System in East Central Indiana was faced with soaring costs, diminished reimbursement and vigorous industry competition. To fast-track improvements, the health system aggregated data from disparate sources and presented it in customized, metric-driven scorecards that were used by its service line managers for strategic planning and in guiding daily decisions. Within a year the organization improved clinical quality, patient volumes, revenues, and patient and employee satisfaction while also narrowing budget variances and lowering operating expenses.

By identifying root causes of potential problems and immediately addressing them, managers can exert more control over their service lines. The scorecards also include volume and charge information, which helps managers understand trends over time and keeps everyone in sync with performance improvement goals.

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## Competing on Analytics (Cont.)

### More than Simple Number-Crunching

Certainly, analytics competitors apply technology. But they also direct their energies toward finding the right focus and hiring the right people to make optimal use of the data. Generally, they pick several functions or initiatives that together serve an overarching strategy. They also hire analytical people who have the ability to express complex ideas in simple terms and the relationship skills to interact well with decision makers. Existing employees, meanwhile, will require extensive training. They need to know what data are available and all the ways the information can be analyzed; and they must learn to recognize such shortcomings as missing data, duplication and quality problems.

*Thomas H. Davenport is the President's Distinguished Professor of Information Technology and Management at Babson College in Babson Park, Mass., the director of research at Babson Executive Education, and a fellow at Accenture. [His latest book is \*Competing on Analytics: The New Science of Winning\* \(Harvard Business School Press, 2007\).](#)*

### Workgroup is Defining Performance Measures for EHRs

Efforts to meet public and private payor demands for quality information are currently hindered by a lack of standards and methods for defining, measuring, extracting and reporting such data electronically. McKesson regularly participates in the Collaborative for Performance Measure Integration with EHR Systems (the Collaborative), which is addressing this issue by identifying the data and standards necessary for electronic performance measure reporting.

Co-sponsored by the American Medical Association, National Committee for Quality Assurance and the Centers for Medicare and Medicaid Services, the Collaborative is focused on addressing "performance measurement functionality and integration with EHRs – based on clinical and technical specifications provided by measure developers – in order to facilitate integration, calculation and reporting within vendor products." Initial work is focused on ambulatory settings. Efforts are being coordinated with other national entities such as the National Quality Forum and the Ambulatory Care Quality Alliance, which have been instrumental in consolidating standards introduced by multiple organizations.

McKesson content specialist Jon Blackman, MD, business analyst Andrea Mitchell, RN, Ph.D., and Deborah Bulger, vice president of performance management, sit on the workgroup charged with a) specifying how performance measures should be delivered to EHR vendors to facilitate their automation and b) standardizing how performance measure data should be exported to CMS and other reporting entities.

"It's important for McKesson to be at the table to represent our customers' best interests and to help ensure that what's meaningful from a quality perspective is also possible from a technology perspective," says Bulger.

## McKesson Recorded Webinars

[Letting Technology Do the Heavy Lifting](#)

[Strategies for JCAHO Compliance: A Data-Driven Approach](#)

[Strategies for the IHI 100,000 Lives Campaign: Using Technology to Support Key Strategies](#)

[Clinical Performance and Medication Reconciliation](#)

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## Are You Old School or New School?



*By Duncan James, group president  
Health Systems Solutions  
McKesson Provider Technologies*

How do you improve if you don't know how you are performing? How do you manage what you don't measure? McKesson believes analytics is the new frontier for health systems and hospitals because of closely related industry drivers such as pay for performance and consumerism, patient safety and quality, and rising costs and shrinking reimbursement.

There are four main components to how we help our customers achieve top performance — applications, services, consulting and analytics. The first three are familiar offerings. Analytics provides the “turbo power” necessary to turn data into actionable information. In doing so, it helps ensure that our applications, services and consulting offerings are combined to enable customers to measurably improve performance where needed.

Hospitals have traditionally used data for decision support – but used it in a way that I call “Old School.” Old School means using claims data for budgeting, contracting and cost accounting – typically by the CFO's team. Analysis of the data has no concept of “time,” such as when a medication was administered – which affects patient outcomes. Yet hospitals have spent the last 3-5 years investing in advanced clinical solutions, such as CPOE, bar-code medication administration and data repositories. A myriad of data points are created during the care process and never used again.

Analytic tools provide the opportunity for “New School” use of clinical data. They combine the rich data generated by advanced clinical IT with data from claims, surgery, scheduling, supply chain and other systems. New School analytics answers questions like: Where do we have inefficiencies in the clinical process? Which procedures or MDs are unprofitable? Which nursing units and individual nurses have low compliance with bedside scanning?

Most commonly, New School analytics is driven by the COO, CMO or director of quality. Not because CFOs aren't interested, but because integrated analytics is more of an operational tool rather than solely a financial tool. New School also means the timing and delivery of reports is very different from Old School. New School provides Web-based scorecards with red/yellow/green indicators and drill-down capability to determine root causes of variations, such as incidence of preventable adverse drug events or compliance with post-surgical wound protocols. These tools can also generate business alerts that identify variances and trends. New School organizations evaluate daily, weekly or monthly scorecards by constituent to create a metric-driven culture.

Meeting market demands to improve quality and lower costs can't be done without the ability to “hardwire” results by embedding and monitoring process change, and to focus everyone on performance improvement. To do so, organizations need to move from Old School to New School. Is your organization Old School or New School?

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## Are You Old School or New School? (Cont.)

### NEW SCHOOL ANALYTICS SCORECARDS

Measure	Actual	Target	Achievement
<b>Heart Attack</b>			
<a href="#">Ace Inhibitor or ARB for LVSD</a>	98	100	98.00% ✓ <sup>1</sup>
<a href="#">Adult Smoking Cessation</a>	97	100	97.00% ✓ <sup>1</sup>
<a href="#">Aspirin at Arrival</a>	98	100	98.00% ✓ <sup>1</sup>
<a href="#">Aspirin at Discharge</a>	97	100	97.00% ✓ <sup>1</sup>
<a href="#">Beta Blocker at Arrival</a>	95	100	95.00% ✓ <sup>1</sup>
<a href="#">Beta Blocker at Discharge</a>	96	100	96.00% ✓ <sup>1</sup>
<a href="#">PCI w/in 120 minutes</a>	75	90	83.33% ✓ <sup>1</sup>
<a href="#">Thrombolytic received w/in 30 min</a>	‡	100	‡
<b>Heart Failure</b>			
<a href="#">ACE Inhibitor or ARB for LVSD</a>	89	100	89.00% ⬇ <sup>1</sup>
<a href="#">Adult Smoking Cessation</a>	90	100	90.00% ✓ <sup>1</sup>
<a href="#">Assessment of Left Ventricular Function</a>	99	99	100.00% ✓ <sup>1</sup>
<a href="#">Discharge Instructions</a>	75	92	81.52% ✓ <sup>1</sup>
<b>Pneumonia</b>			
<a href="#">Adult Smoking Cessation</a>	96	100	96.00% ✓ <sup>1</sup>
<a href="#">Blood Cultures</a>	96	100	96.00% ✓ <sup>1</sup>
<a href="#">Initial Antibiotic Timing</a>	85	93	91.40% ✓ <sup>1</sup>

Measure	Actual	Target	Achievement
<b>Nosocomial Infections</b>			
<a href="#">% Lower Respiratory Infections</a>	1.89%	1.94%	102.75% ✓
<a href="#">ALOS Lower Respiratory Infections</a>	9.31	3.28	35.22% ✗
<a href="#">% Urinary Infections</a>	3.83%	3.84%	100.36% ✓
<a href="#">ALOS Urinary Infections</a>	6.45	3.28	50.86% ✗
<a href="#">% Wound Infections</a>	0.32%	0.32%	100.36% ✓
<a href="#">ALOS Wound Infections</a>	17.00	3.28	19.29% ✗
<b>Pressure Ulcers</b>			
<a href="#">% Pressure Ulcers</a>	0.59%	0.54%	92.64% ⬇
<a href="#">ALOS with Pressure Ulcers</a>	9.53	3.56	37.33% ✗
<b>Ventilator Associated Pneumonia</b>			
<a href="#">% Ventilator associated Pneumonia</a>	20.3%	20.00	98.43% ✓
<a href="#">% Ventilator Mortality</a>	32.7%	25.00	76.52% ✗
<b>AMI</b>			
<a href="#">% AMI Mortality</a>	2.78%	2.50	89.79% ⬇
<a href="#">ALOS AMI</a>	3.65	4.45	121.95% ✓
<a href="#">AMI Resource Intensity</a>	1.6333	1.5944	97.62% ✓

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