

Business Intelligence in an Era of Reform: Strategies for Improvement



HIGHLIGHTS FROM HFMA'S 2012 CFO SUMMIT

In an era of value-based payment and care delivery, the need for timely and accurate business intelligence to support decision making by hospitals and health systems has never been greater.

Business intelligence—a provider's ability to collect, analyze, and connect accurate quality and financial data to support decisions that improve the value of care—is one of four key capabilities identified by HFMA's Value Project that hospitals and health systems should cultivate as they adapt to value-based business models for payment and care delivery. But the quality of data that these organizations have access to—for measuring both the quality of care that they deliver and how much it costs to provide care—is not very good, healthcare leaders agree. They identify a lack of timely and effective business intelligence as a barrier to improving value in health care.

For example, at an HFMA Thought Leadership Retreat in October 2011, 61 percent of participants said they believe decision makers at most provider organizations would say costing data are only sometimes accurate, timely, appropriate, and reported in a useful manner. "Although the data may work at a broad-based organizational level, when providers drill down to specific procedures or processes, the costing data do little to help decision makers understand variation and cost related to variation," says HFMA President and CEO Richard L. Clarke, DHA, FHFMA. "There is a need to develop principles around costing and costing data to assist providers in the transition toward a value-based business model."

Healthcare leaders who attended HFMA's 2012 CFO Summit, sponsored by Siemens Healthcare Solutions, this past March agreed, saying hospitals and health systems face numerous challenges when it comes to generating and accessing timely, reliable, and relevant business intelligence. These challenges include a lack of standards around data collection and analysis (such as costing data), limited resources (such as the technologies and staffing that will be required to support more effective data capture and analysis), questions regarding data integrity, and more (see the sidebar on page 81).

Now is the time for hospitals and health systems to take a hard look at the barriers that are impeding their ability to collect, analyze, and effectively use data related to cost and quality to support decisions that improve the value of care, and to overcome these barriers through collaboration and lessons learned from other health systems.

"The key question is, what kind of resources do you have available in your organization that can drive change? Because at the end of the day, that's what you want to be able to do with the data you have available—drive change," says John Neider, global market manager for Siemens Healthcare Solutions. "You need the capacity to pull together data from a variety of disparate sources—some of which you own, and some of which you need, such as data from health information exchanges—and to evaluate the impact of variation in care, medical interventions, and more on your organization's ability to provide care that is high in quality and value."

Overcoming Obstacles to Timely, Relevant Data

Across the nation, financial incentives for providing high-quality care are taking effect—and organizations are being penalized for readmissions, hospital-acquired conditions, and higher-than-average costs for providing care, whether by government, payers, or patients who are using quality and cost data to determine where to seek care.

“We’re moving from a focus on pay for performance to pay for results,” Neider told healthcare CFOs and other leaders who participated in HFMA’s 2012 CFO Summit. “Measuring an organization’s margin alone is necessary, but not sufficient. There are going to be new requirements in health care that will necessitate shared accountability among finance and clinical staff for the quality of care and service that a hospital or health system provides.”

For example, the final rule for meaningful use of electronic health records (EHRs), published in July 2010, added quality measures that required for most organizations some degree of chart abstractions, Neider says. Under the final rule for meaningful use, hospitals were required to electronically calculate the 15 clinical quality

measures specified by the Centers for Medicare & Medicaid Services. To do so, hospitals had to:

- Access information from both ancillary systems (e.g., operating room, emergency department) and unstructured data sources (e.g., unstructured free text reports such as “Cardiologist Report,” “History and Physical”)
- Respond to changing guidelines of calculation of metrics
- Submit numerator and denominator data for each metric

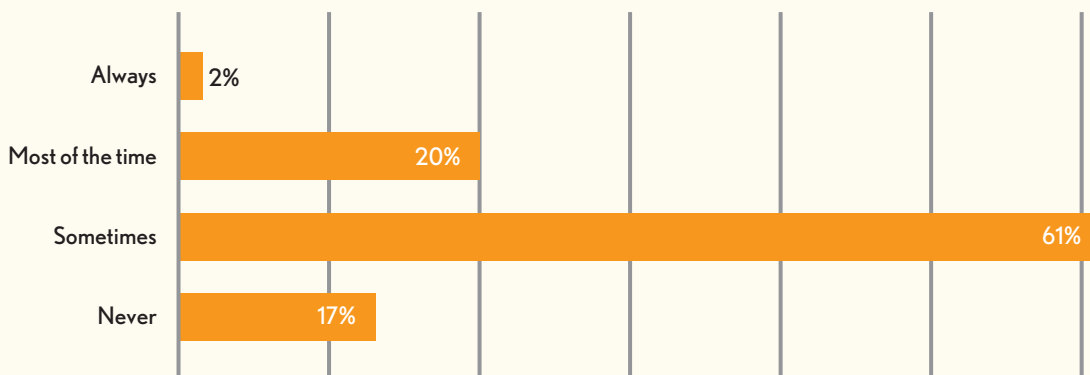
Stage Two for meaningful use has raised that bar such that hospitals (i.e., eligible hospitals and critical access hospitals [CAHs]) must select 24 new clinical quality measures from a proposed list of 49 measures across six domains of quality:

- Patient and family engagement
- Patient safety
- Care coordination
- Population and public health
- Efficient use of healthcare resources
- Clinical process/effectiveness

Eligible professionals, as distinct from eligible hospitals and CAHs, must choose 12 measures from a pool of 125 proposed clinical measures in these quality domains.

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Decision makers at most provider organizations would say that costing data are accurate, timely, appropriate, and reported in a useful manner:



Source: HFMA Thought Leadership Retreat Survey, October 2011.

The importance of helping healthcare organizations stay ahead of the curve in EHR data abstraction and analysis—and of using this business intelligence to reduce variations in care, work toward increasing patient safety by eliminating hospital-acquired infections and other costly complications, reduce cost, and improve quality of care and patient satisfaction—has never been greater.

“You need to skate to where the puck is going, not to where it has been,” Nieder says. “You need to be able to view the information in such a way that it supports your organization’s ability to drive change, whether through a high-level dashboard or a more detailed snapshot of clinical care

patterns and results in your organization. And healthcare organizations need to be able to use the data to evaluate the cost, both direct and indirect, of major product lines across medical and surgical patients. Finally, they need to understand the impact of preventable medical errors and help support dialogue on ways to improve both the processes and outcomes of care.”

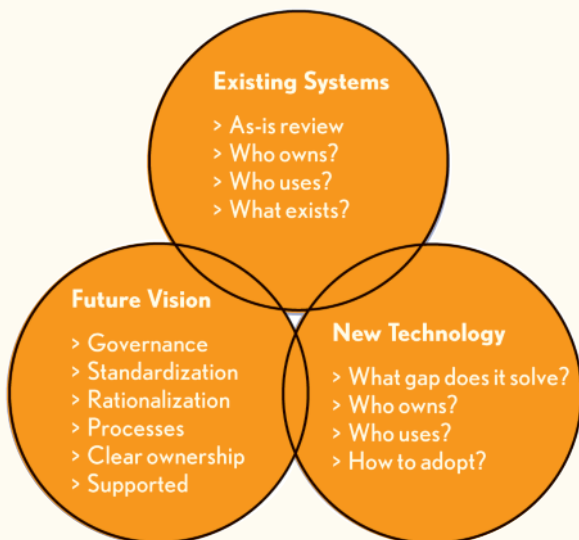
But CFOs and other healthcare leaders who participated in HFMA’s 2012 CFO Summit cited more than a dozen obstacles to strengthening their organization’s ability to collect, analyze, and effectively use clinical and cost data to enhance value (see the sidebar below).

BARRIERS TO IMPROVING BUSINESS INTELLIGENCE IN HOSPITALS AND HEALTH SYSTEMS

During breakout discussions at HFMA’s 2012 CFO Summit, participants from healthcare organizations across the nation cited a number of barriers to the transition to a value-based business model in health care. Those barriers include the following:

- The need for technology that can support more timely and automated access to data
- Lack of transparency and data from payers and non-owned providers
- Limited resources (such as the staffing that will be required to support more effective data capture and analysis and the capital to support the purchase of more advanced technologies)
- The absence of standards around data collection and analysis
- Gaps in communication regarding the targets an organization is trying to hit, and why
- A lack of understanding among some physicians and staff regarding why data are being collected and how these data are going to be used
- Measurement of too many metrics to hold the focus of clinicians and physicians
- Questions regarding data integrity (e.g., Are employees coding expenses consistently across the organization?)
- The effect of business process change on an organization’s ability to optimize current systems for data collection and analysis
- Silos that make it difficult to engage staff throughout the organization in efforts to improve business intelligence
- Difficulties in tracking the ROI of business intelligence technologies
- Prioritizing the efforts of the organization’s business intelligence committee

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Limited resources—such as the technologies and manpower that will be required to support more effective data capture and analysis—were a top concern for these healthcare leaders; silos that make it difficult to engage staff throughout the organization in clinical data capture were another.

“It takes a lot of patience, a lot of coordinated effort, and sufficient resources to develop an effective business intelligence strategy,” says Michael D. Blaszyk, senior executive vice president and CFO, Dignity Health, San Francisco. Initially, it was difficult to convince senior leaders that there was a need to invest in technologies that could support business intelligence EHR systems. “There are competing interests within operations related to hard assets and systems.”

And even for organizations that have the technologies to support abstraction of data, developing the capabilities to manage and query these data effectively, to assist users in understanding the data, and to prioritize initiatives based on the data can still be challenges. “We have lots of data. We are not an organization that is bereft of data. But we have not been able to harness those data as well as we should,”

says Peter Markell, vice president of administration and finance, treasurer, and CFO, Partners HealthCare, Boston. “The amount of time we spent extracting data was greater than the amount of time we spent analyzing data. That is a fundamental shift that we are trying to make.”

At University Hospitals, based in Cleveland, fewer than 23 percent of the organization’s data have been used in the past year. “You need a program capable of integrating data into a consistent information resource to support performance improvement, business transformation, decision making, and enterprise planning,” says Don Paulson, FHFMA, vice president finance/revenue cycle, University Hospitals. “You also need a system that is very nimble and allows you to sort the data any way you like.”

Additionally, the lack of transparency and data from payers and nonowned providers, the absence of standards around data collection and analysis, and questions internally about data integrity are significant barriers in hospitals’ efforts to leverage business intelligence to drive improvements in value, conference participants agreed.

“What my organization is unable to cost is that entire continuum of care, that entire diagnosis,” a participant in one of the conference’s breakout sessions commented. “We’re slowly gaining access to the data we need, but we don’t have all of the data yet. And piecing all of those data together, and tying them to one diagnosis, is difficult. How do we tag all of those pieces of information so that we’re able to distinguish ‘pre-cancer care’ or ‘post-cancer care’? That’s a limitation of our system.”

The expense related to developing a strong business intelligence platform is daunting, Neider acknowledges—but the cost of not making the investment now, as the shift toward value-based business models is taking place, will be greater in the long run.

“There is a limit to the personnel cuts that healthcare organizations can make to reduce expenses,” Neider says. “At the end of the day, healthcare organizations need to

work smarter, using less to achieve more.” he says. “One key resource in achieving this goal is a business intelligence solution that is the single source of data for the organization. When cost and quality collide, business intelligence is the key to understanding the drivers of performance. For example, at one Midwestern hospital, an analysis showed that the average cost to treat a catheter-related bloodstream infection was \$91,000, whereas the average reimbursement was about \$67,000. That’s a loss of \$24,000 per infection. There is a popular saying that goes, ‘You cannot manage what you do not measure.’ You need to elevate the importance of business intelligence in your organizations.”

Strategies for Improvement

Healthcare organizations should consider a number of action steps to strengthen their business intelligence capabilities.

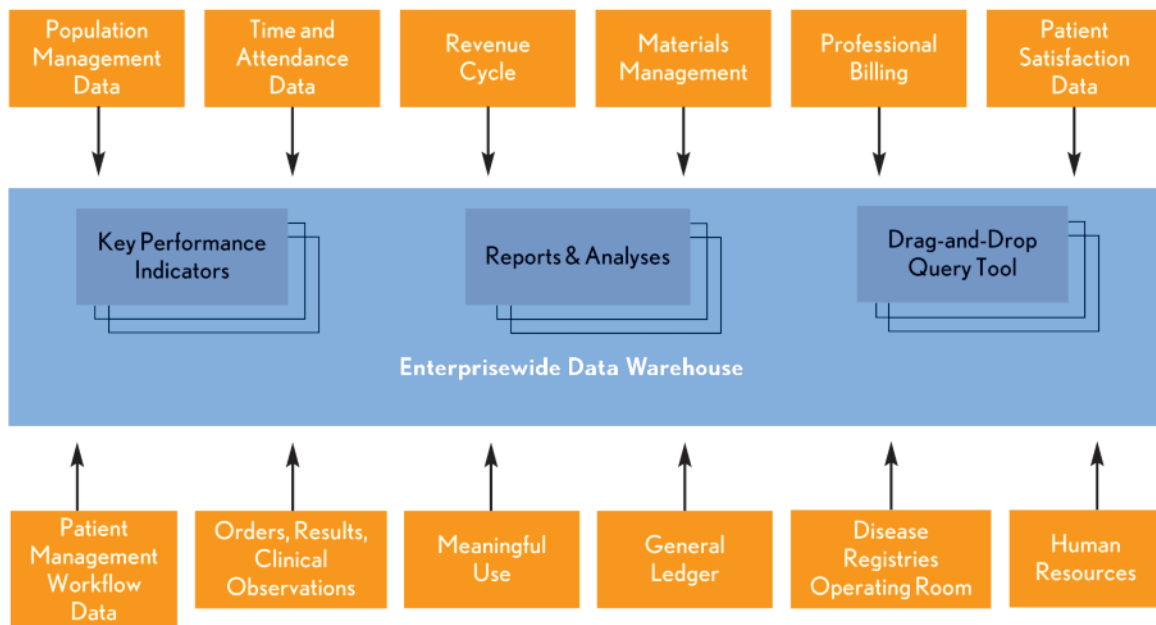
Develop a single point of access for data. Partners HealthCare created a single, integrated enterprise data warehouse that leveraged the efforts of the organization

as a whole as well as individual departments. “It’s important that leaders, clinicians, and staff be able to pull the data from a single source of truth, and that they be trained in ways to use the data,” Markell says. At Partners, staff throughout the organization collaborated to ensure efficient data extraction and successful data stewardship. Data warehouse users provide feedback on data quality so that business units can take steps to improve data collection, when necessary.

Create an enterprisewide data strategy to ensure the accurate and consistent calculation and reporting of data across the organization. “Strong enterprise governance is needed to guide the overall effort,” Markell says.

Move toward automating extraction of structured and unstructured data from EHRs. Manual chart extraction is time-consuming and cumbersome and leaves room for error, Neider says. Using automated data collection, Reading Hospital and Medical Center in Reading, Penn., improved its quality data abstraction time by more than 300 percent for both heart failure and acute myocardial

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infarction and by more than 200 percent for its surgical care improvement project. “There are tools available that can automate the process of measuring unstructured data, put the data into a structured format, and help lead us toward process improvement,” he says.

Establish a business intelligence committee and prioritize its efforts. The biggest difficulty Dignity Health faced in using business intelligence data to guide process change was prioritizing the business intelligence committee’s efforts, Blaszyk says. At Dignity Health, business intelligence efforts are evaluated based on strategic alignment, business value proposition, cost, and risk. It’s also important to ensure that finance is not dictating the business intelligence mission, CFOs agreed—although finance has an important seat at the table, given the expertise in analysis that finance professionals bring to such initiatives.

Standardize definitions of data. For example, what is an outpatient visit? What constitutes a surgery? What is a discharge? Standardized definitions are particularly important when the same metric is being tracked across different departments or facilities so the data will be credible, comparable, and actionable. It’s also important that physicians and staff understand why a metric is being tracked. “A staff member once asked me, ‘Why are we measuring discharges?’ ‘That’s how we get paid,’ I explained,” Paulson says. When data are also needed from payers or other healthcare organizations, work to ensure that common definitions for data are used. “That’s part of why standardization of data is so difficult in health care: It’s an issue that stretches beyond your own organization,” Markell says.

Measure only what you intend to change. “When you measure too many metrics, the data become white noise over time for physicians and clinicians,” Paulson says.

Taking Steps Forward in the Move Toward Value

The work that will be required of hospitals and health systems in transforming their business intelligence capabilities is daunting—but overall, CFOs and other leaders who attended HFMA’s 2012 CFO Summit were focused more on the journey toward improved business intelligence than the obstacles.

“One thing that I’m not hearing people say is, ‘I can’t do it,’” HFMA’s Clarke says. “Instead, the discussions I’m hearing are focused on how we can become better at business intelligence and what we can do—as finance professionals and in collaboration with clinicians and IT professionals—to make a difference in this area.

“At the end of the day, business intelligence is the ability to make better decisions that improve quality of care and reduce cost,” he says. “We should be giving decision makers the information they need to understand the contribution margin of an activity as we look at ways to maximize resources and our processes to improve value for our patients, for payers, for the communities we serve, and for our organizations as a whole.”

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