WEB FEATURE

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managing the true costs of health care
a roadmap to cost analytics

Cost analytics is a primary means by which healthcare organizations can increase efficiency and reduce costs while maintaining a high level of quality.

AT A GLANCE

> As healthcare organizations inexorably away from a fee-for-service system, they are seeking innovative ways to increase value.

> Organizations should consider a new methodology that can accurately measure activities, resources, and cost objects to determine revenues and expenses according to the patient's activities across the continuum of care.

> Implementation of this methodology requires support from leadership as well as input from staff across the organization.

"The Cost of Health Care in the United States Is Monstrous"

This headline underscores a problem that's not just the leading concern for the healthcare industry but also one of the nation's biggest challenges: The nation spends about 16.9 percent of its gross domestic product on health care, while other industrialized nations spend 9– 11 percent. Comparing per capita expenditure, the United States spends more than 150 percent of the Organization for Economic Co-operation and Development (OECD) average.[a]

According to a report by McKinsey, 15 cents of every U.S. healthcare dollar goes toward revenue cycle processes, which are largely inefficient.[b] Of the $2.7 trillion the country spends annually on health care, $400 billion goes to claims processing, payments, billing, revenue cycle management, and bad debt, partially due to the inefficiency of payer-provider transactions. In addition, physician groups and individual medical practitioners have concentrated their efforts on patient billing rather than on implementing effective financial controls across their revenue cycles—a practice that leads to revenue leakage.

Although they may disagree about the source, government and industry representatives and consumers all agree that there is a problem. The consensus is that healthcare is highly siloed, from health plans to providers,

a. "OECD Health Statistics 2016," Organization for Economic Co-operation and Development, Oct. 12, 2016.

b. Bayley, M., Calkins, S., Levine, E, et al, "Hospital revenue cycle operations: Opportunities created by the ACA," McKinsey, May 2013.

from clinical departments to financial departments. In response to this challenge, financial, qualitative, and clinical leaders are coming together with a common goal of determining the true cost of healthcare delivery by location, service line, resource or caregiver, and population.

New Solutions for a New Era

In a world of shrinking fee-for-service payment, the industry can no longer rely on revenue management; we require accurate cost management technology and analytics. We know that a fee-for-service system creates incentives for providers to order more tests and perform more procedures in the pursuit of best possible clinical outcomes. However, as the industry toward a value-based system, where outcomes are increasingly evaluated on cost and quality together, older cost management methods, such as relative value units (RVUs) or ratio of cost to charges (RCC), are no longer optimal.

A new methodology is needed to accurately measure activities, resources, and cost objects (e.g., patient episodes of care and specific services delivered) so that revenues and expenses can be determined based on resources consumed and actions taken to deliver care for each patient across the continuum of care.

Activity-based costing (ABC) is one such approach. It first measures the cost and performance of activities, resources, and cost objects and then assigns resources to activities and activities to patients based on their actual use. The approach provides an effective way to measure and manage costs, improving on traditional methods.

Where Current Solutions Can Fall Short

Most hospitals' accounting systems are set up to collect financial data in aggregate and average metrics. This structure, while useful in a fee-for-service system, is not conducive to support the shift to a value-based, quality-centric healthcare delivery system, in which this level of financial data detail will rapidly become inadequate.

As healthcare delivery systems move toward a shared-risk model with the goal of achieving a completely capitated framework, it becomes increasingly important for them to study patient-level data as a means to control ongoing costs. Understanding this level of detail can provide benefits such as assessing physician variability in treatment paths or helping to negotiate rates for bundled payment amounts.

Cost analytics solutions should provide information to drive well-informed decisions affecting (and generating value in) many areas, including an internal hospital services center, supplies rationalization, physician practice variance, service-line analysis (to understand the market and drive the strategy of the business), and health plan contracts.

The Impact of Cost Analytics on Provider Organizations

Cost analytics provide a systematic and analytical approach to representing true operational and cost data regarding treatments of individual patients and their medical conditions. Such analytics also support management and clinical personnel in their efforts to identify the most effective and efficient way to provide care.

Many provider organizations do not collect and calculate information regarding the total cost of care of their patients. For these organizations, any efforts to implement an effective cost analytics strategy necessarily must begin with developing an understanding of resource utilization by service center, cost per patient/service, and the variance of physician practices.

From a financial and operational perspective, that information will allow management to understand the critical components of the operational expenses as a hospital or health system moves toward a value-based care model. Analysis of costs and metrics to identify physician variability by same medical condition (i.e., service line) also is required to optimize the organization's care delivery system within a given subspecialty.

This information, in turn, will provide a retrospective view of physicians' behaviors, allowing physicians to understand the impact of their activities on expenses and allowing hospitals to assess their macro level activities by patient encounter.

Provider networks can leverage these findings in several ways. Initially, a horizontal cost tracking analysis will expose cost-level information by medical condition, DRG, physician, and service line, bringing to light relevant and valuable information such as variations in individual physician care practices or variations in care at the sub-specialty level across hospitals within a system. Provider networks also can access activity and cost information by linking each individual service center (e.g., radiology, cath lab, operating room) with the horizontal perspective of service line. These approaches are depicted in the exhibit below.

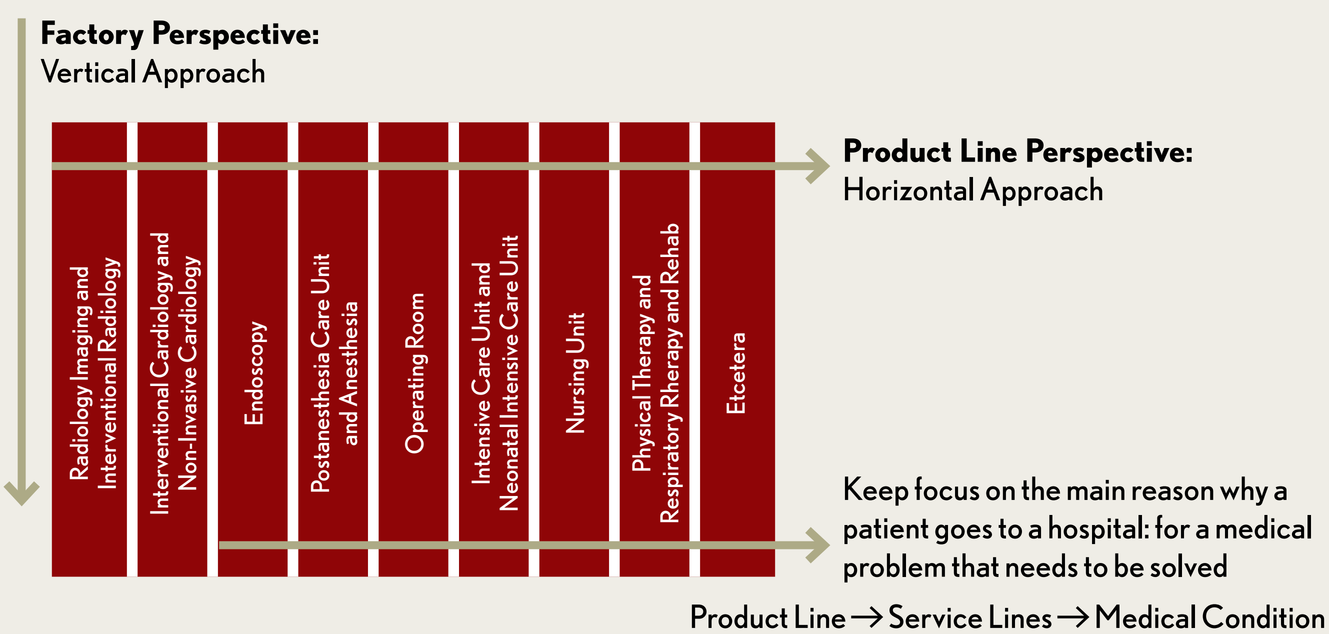
The data gleaned from a cost analytics program can provide insight by quantifying financial outcomes of process changes—something that affects every provider system. Such information also represents a single source of truth pertaining to all clinical and financial information, which can provide support with negotiating fees for service contracts.

All hospital systems, small or large, that decide to implement cost analytics can achieve significant improvements in how they manage costs and improve outcomes. An example is shown in the exhibit on page 4..

An Agent of Organizational Change

Cost analytics also can help facilitate the development of bundled payment strategies. Having such detailed information could allow for approval of bundled payment applications for a given procedure.

HORIZONTAL AND VERTICAL APPROACHES TO COST TRACKING



By integrating the vertical perspective (departments/service centers) with horizontal perspective (medical condition/service line), a healthcare organization can glean access activity and cost information.

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HOSPITAL SYSTEM SERVICE-LINE ANALYSIS: ORTHOPEDICS (HIP REPLACEMENT)

	Facility A			Facility B			Facility C		
	Provider			Provider			Provider		
	1	2	3	1	2	3	1	2	3
Net Patient Revenue	$150	$225	$185	$320	$240	$110	$440	$150	$80
Hospital Services: Diagnostic	Hospital Services: Metrics and Costs			Hospital Services: Metrics and Costs			Hospital Services: Metrics and Costs		
Hospital Services: Interventional									
Hospital Services: Surgical									
Hospital Services: Nursing									
Hospital Services: Other Clinical									
Total Expenses	$146	$224	$165	$290	$235	$111	$410	$165	$82
Operating Margin	3%	0%	11%	9%	2%	–1%	7%	–10%	–3%

Operating margin and physician variability were analyzed in three hospitals across a system for a comparable patient cluster of hip replacements. Through the costing process, the system's best practice for hip replacement was identified and finalized with a goal of obtaining better outcomes and utilization of resources and services. The process improvement project resulted in reduced variance among physicians, helping to reduce cost by 10 - 20 percent, increase operating margin, and reduce the overall number of outliers.

There also is a potential for operational savings by identifying opportunities for consolidating services by location or eliminating locations. Such opportunities could be identified by using data analytics to benchmark services internally by hospital location to determine which facilities have been exhibited the highest levels of performance, in terms of cost and quality, on specific procedures.

Cost analytics can be a catalyst to support an organization redefining how it views its operations. Accurate cost analytics information also will enable tracking of patient costs and activities for the entire continuum of care. Organizations looking toward making the shift to an accountable care organization (ACO) structure will find cost analytics essential to understanding true cost of care.

Determining Readiness

Organizations interested in implementing a cost analytics solutions must first ask three questions.

Do we have a leadership sponsor and a dedicated team for such a journey? It is essential to have strong support from leadership, generally C-suite leaders, in the form of project sponsorship. Senior management also should help create an internal team made up of members of key areas, such as finance, analytics, and operations, to help serve as change agents within the organization.

How will methodology and goals be defined? Goals should be developed against an organization's primary business objectives. Details should branch off the value proposition—i.e., the need to determine and manage patient costs, improve margins, and produce better outcomes. The selected methodology should connect costs to the production process and not be based upon revenue cycle models. This is a long journey that can best be initiated with specific goals, such as achieving cost savings within a specific service line, preparing to pursue bundled payment, and reducing the extent of physician practice variations for a specific medical condition.

How long will the process take? The timing of the project will vary depending on the size of the organization, the availability of a dedicated team to lead change, and the necessary support from senior management. Once the team, vision, and methodology are set, an organization could begin seeing concrete results within 18 months.

Implementation Considerations

There are several fundamental considerations regarding the value proposition of cost analytics that will inform an organization's decision to implement such a solution. When evaluating options, for example, provider systems will need to consider:

> The relative urgency of cost transparency
> The challenges inherent in comparing the cost of services across multiple locations
> The need to organize by service lines and the change of perspective from vertical to horizontal
> The relative merits of previous models and the traditional ways hospital organizations have been structured
> The need for a clearly defined methodology that is based on activities (resource consumption)
> The extent to which physician variability in treating medical conditions and the variability in performance and outcomes among different locations open the door to potential performance improvements

After considering the above factors, systems must then consider whether to make or buy its solution. Making such a solution requires dedicated staff from operations and finance and takes an average of 24 months to complete, so healthcare organizations must be prepared to dedicate time and resources to this endeavor. In any case, it is critical that the cost analytics solution be capable of translating information to both financial and clinical areas, so this consideration should be a primary area of focus. Representing the true cost of care for clinical operational processes necessitates this approach.

A Progressive Approach

The information gathered with the cost analytics approach can provide valuable data regarding profitability by service line/medical condition, DRG, and individual physician variability. Detailed analysis also can be provided by payer and geographical location (patients' residency or hospital location).

But beyond the potential of providing such benefits, the use of cost analytics represents a progressive approach aimed at representing resource consumption, expenses and revenue, and operational data at a patient encounter level. As such, because it also conforms with the essential focus an requirements of value-based care, it represents an aspect of our nation's healthcare system that is likely to endure through the many changes that come about as a result of the change in administrations. The approach is valuable as a means to foster productive discussions around physician variability, standardized pathways, and new payment models, ultimately leading to better financial and clinical outcomes in a provider's value cycle. ■

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