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## **the physician value index** **a tool for effective physician integration**



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A new solution can help a hospital bring physicians into greater alignment with an organizational strategy to develop an accountable care organization, thereby contributing to the viability and profitability of the strategy.

## AT A GLANCE

- > The physician value index is a metric that can help hospital leaders understand the various levels of physician performance along the care continuum in terms of cost and quality.
- > The metric illustrates physician performance in the context of an overall quality of care composite that incorporates patient satisfaction, care outcomes, patient safety, and hospital financial performance.
- > Hospitals can use the metric to identify and leverage the practices of top-performing physicians to improve overall system financial performance and patient quality of care.

“I think doctors are motivated to improve if they see objective data that they are not performing as well as their peers. It is not necessarily a financial incentive, but a patient care incentive that will motivate them.”

—Jack Lewin, CEO, American College of Cardiology (as quoted by Goldman, E., “Pay-for-Performance Advocates Acknowledge Flaws: If Not Designed Carefully, Plans Can Warp Physician Behavior and Fail to Improve Health Care Quality,” *Internal Medicine News*, Sept. 1, 2007)

Hospitals face unprecedented challenges today in preparing for healthcare reform and regulatory requirements, an ever-increasing population of uninsured, fast-rising supply and device costs, and even more rapidly shrinking reimbursements. These challenges exert pressure on hospital leaders to drive profitability and maintain high-quality care. And they force hospital leaders to rethink their approach to rescue and protect margins. Hospital executives now find that incremental performance improvement no longer works. What they want is an innovative business model that will do more than just help them weather the storm. They want to put an absolute end to shrinking margins and position their institution for sustainability and profitability.

Hospitals now have a tremendous new opportunity with the prospect of developing accountable care organizations (ACOs), as outlined in the Affordable Care Act. The goal of this aspect of the legislation is to integrate hospitals and physicians by holding them jointly responsible for quality and cost of care. The ACO model simply encompasses a patient care continuum that includes the hospital, primary care physicians, specialists, and potentially other medical professionals. Innovative hospitals are taking the lead to develop coordinated care systems that embody the core principles underlying ACOs. They have come to view physicians as partners and collaborators in this enterprise.

The biggest challenge for hospital leaders in today's post-reform era is aligning clinical and financial goals without undermining quality of care. Many healthcare providers believe that *quality of care* and *cost of care* are conflicting ends of a spectrum—success with one is at the expense of the other. This attitude mirrors that of the U.S. auto industry in the 1970s and 1980s, until Japanese competitors proved them wrong. The lesson came at a high price: The U.S. lost dominance in the global automotive market.

Yet achieving ACO status and a high level of overall performance depends on absolute clinical-financial alignment, which begins with successful physician integration across the care continuum. Because physician decisions and actions impact 70 to 80 percent of the hospital cost structure, leaders need to address the question, “Do we really understand how to engage physicians to align their interests with ours?”

To begin to answer this question, hospital executives should first identify problems, prioritize them, and analyze root causes to make changes that will yield the greatest impact.

### **Talking Change with Physicians: Storytelling or Hard Facts?**

If physicians resist clinical process change, it is often because of how the case for that change is presented to them. The usual approach to communicate with them is project-based and anecdotal. For example, hospital executives may cite the fact that a physician is using a high-cost hip implant associated with an average length of stay of five days but the hospital still has a higher-than-average 30-day readmission rate. The physician is unlikely to accept such anecdotal data and will probably respond with a common rebuttal: “These patients were sick and had a high risk of mortality.” The physician may also question the statistical significance of the sample.

Instead, the hospital administrators should have presented the physician with a statistically significant sample (including confidence intervals) of a specific patient case mix with no complications

## **Innovative hospital systems know that the best way to gain physician buy-in for change is by showing how clinical processes affect financial performance.**

and low risk of mortality, which resulted in a high cost of care and low quality of care. The physician would likely be much more receptive to this approach, especially if he or she is also presented with other physician data reflecting a comparable patient mix but with a lower cost and higher quality.

In short, because of their training, physicians typically are much more likely to be persuaded by research and facts. When faced with a holistic view, backed with data, they are much more likely to respond enthusiastically. Innovative hospital systems, therefore, know that the best way to gain physician buy-in for change is by showing how clinical processes affect financial performance.

Knowing what's required, do hospitals have “actionable insight” for productive communication with physicians? Traditional decision support systems offer only department-centric information, creating silos and many versions of truth. Without patient-, process-, and outcome-centric intelligence, hospitals lack transparency and predictability around cost of care and quality of care by physician, diagnosis-related group (DRG), facility, and other dimensions.

Consider these four questions:

- > Do you measure and report cost and quality to demonstrate value along many dimensions?
- > Are you confident in your ability to analyze raw data on cost and quality thoroughly and correctly?
- > Does your current analysis show physician impact on hospital performance from quality and cost perspectives?
- > Are the analytical processes institutionalized, repetitive, and continuous?

A “no” to even one of these questions indicates a need for greater preparation before you pursue an integrated or ACO business model. Any effort lacking a system perspective will be viewed as just another “consulting program of the day” and will not have a lasting impact. A hospital can build trust with ACO stakeholders only by clearly showing the quality and cost of care by episode, facility, physician, DRG, and other dimensions.

**A Strategy for Physician Integration**

Where do physicians exist in the care continuum in terms of quality and cost? Strategic physician integration should be founded on a clear understanding of physician performance levels along the care continuum if it is to succeed. The *physician value index* is a dynamic and comprehensive set of metrics that can help hospital leaders achieve this understanding.

This metric set illustrates physician performance in the context of overall patient satisfaction and hospital financial performance. With this frame of reference, hospital leaders can begin to measure how specific actions by physicians within and across DRGs can directly impact overall system financial performance and quality of care. By

using cost and quality as the basis for the analysis, it becomes clear which changes will improve cost without sacrificing quality, or improve quality without adding cost.

The physician value index is predicated on a comprehensive, systemwide analysis of quality-of-care metrics. Every quality measure from each system (e.g., clinical, operational, and ancillary) is collected and classified by impact on key performance indicators (KPIs) related to considerations such as safety, outcomes, and process. The KPIs are assessed systematically to determine the impact on physicians. All measures are then rolled up to provide an aggregate score of quality of care by physician by DRG, as is shown in the exhibit below. Then, to develop a physician value index, health-care leaders map the quality-of-care scores for physicians and DRGs against cost of care.

**The Physician Value Index**

Visually, the physician value index is a matrix in which top-performing individuals appear in the upper right quadrant, and low-performing individuals appear in the lower left quadrant. The X axis represents performance along quality of care. The Y axis shows performance in terms of

**QUALITY-OF-CARE METRICS BY PHYSICIAN**

Surgeon	Count	Total Cost	Average Cost	Structural	Safety	Process	Outcome	Satisfaction	Average Quality
Total	720	\$16,158,209.55	\$22,441.96	60%	70%	89%	57%	83%	72%
97175	147	\$3,247,510.41	\$22,091.91	62%	71%	89%	58%	79%	72%
91926	65	\$1,415,563.12	\$21,777.89	55%	70%	90%	57%	85%	71%
91975	55	\$1,226,759.59	\$22,304.72	55%	68%	88%	57%	79%	69%
96196	55	\$1,026,767.31	\$18,668.50	63%	70%	88%	58%	76%	71%
97244	44	\$979,691.42	\$22,265.71	57%	70%	87%	57%	82%	71%
91305	43	\$1,040,402.79	\$24,195.41	48%	65%	89%	55%	89%	69%
94161	35	\$769,208.18	\$21,977.38	60%	70%	88%	58%	80%	71%
53473	28	\$612,292.28	\$21,867.58	60%	67%	90%	57%	85%	72%
50286	25	\$549,271.24	\$21,970.85	68%	71%	89%	59%	88%	75%
96011	19	\$375,862.18	\$19,782.22	66%	76%	90%	58%	89%	76%

Showing 1-10 of 51 records

Source: PSCI Inc.

To ensure the ongoing success of an ACO model, physicians should have ongoing access to intelligence that allows them to compare their own performance, efficacy of diagnosis, and treatment with those of peers.

cost of care. Each physician would appear on the matrix according to his or her cost-quality rating. Hospitals can use the physician value index to establish and leverage the practices of best-in-class physicians and identify improvement opportunities. Physicians may appear by name, or they may be kept anonymous using a numerical identifier, which can contribute to a more clear understanding of the matrix.

**Category I: High quality, low cost of care.** This physician group is the “dream club” for any health system. These physicians rate high in patient satisfaction and on the core outcome measures advocated by the Centers for Medicare & Medicaid Services (CMS). They drive high reimbursements under the new performance-based payment system. Using decision support technologies to analyze their practice patterns and clinical processes—resource utilization, procedures, physician preferred items—hospitals can design order sets by case mix based on various factors, such as demographics, complication level, and severity index. For example, the “dream club” physicians may administer an aspirin to a heart attack patient within six minutes after entering the emergency department, whereas other physicians might take a much

longer time on average. This information can then be used to enhance the feed of order sets to staff and physicians. The physicians in this group can be appropriately viewed as thought leaders, and their success can be leveraged to stimulate change management.

**Category II: High quality, high cost of care.** This group is often the most challenging when hospitals want to encourage changes in practice patterns. These physicians deliver high-quality care and high patient satisfaction, and they are convinced that change will lower quality of care. Transparency and decision support models are likely to help convert these skeptics. These physicians are likely to cite every reason why their patient mix is different and deserves a special treatment approach, but they can be persuaded to modify their practices if the hospital can effectively demonstrate how their quality and cost of care compares with the performance of category I physicians for similar case mixes. Simply put, the physician value index can be used as a starting point to communicate and persuade these physicians to modify practices to reduce cost without undermining quality of care.

Visually, the physician value index is a matrix that contains top-performing individuals in the upper right quadrant, and low-performing individuals in the lower left quadrant. The X axis represents performance along quality of care. The Y axis is performance in terms of cost of care. Each physician would appear on the matrix according to his or her cost-quality rating. Hospitals use the index to establish and leverage the practices of best-in-class physicians and identify improvement opportunities.

THE PHYSICIAN VALUE MATRIX



Source: PSCI, Inc.

## FEATURE STORY

The physician value matrix reveals opportunities and is a starting point for open communication and collaboration with physicians. Hospitals can show what changes are necessary by category II and III physicians to achieve category I performance. Quarterly tracking shows performance trends by physician, which helps management teams understand the degree of compliance and impact of quality improvement projects, such as order set standardization programs.

For example, one hospital used data-driven decision support models to persuade its category II physicians to reduce average length of stay from seven days to six simply by showing these physicians the quality and cost scores of category I physicians with a similar patient mix. The hospital was able to perform a variety of “what-if?” scenarios to show the impact of change on both quality and cost. Category II physicians can have a significant impact on hospital financial performance, but only when they have a reason to believe that change will not sacrifice quality or patient satisfaction.

**Category III: Low cost, low quality of care.** A physician in category III is usually a “quick study”—he or she simply needs access to quality data. Often, physicians in this group claim that quality metrics are not a comprehensive view of patient care. They may present a few legitimate arguments, but ultimately, factors such as patient satisfaction scores and the core measures advocated by CMS will be most influential on these physicians and will produce the greatest impact on hospital and physician financial results.

As consumers begin to demand performance transparency at the physician and hospital level, quality and cost performance will become more critical. Hospitals need to persuade category III physicians to align their individual interests with the organization’s common performance goals. These physicians are prime candidates for implementing standardized order sets, for example. By showing how order sets have been developed based on the best practices of category I physicians for similar demographic and severity-of-illness patient mix, a hospital can give category III physicians a strong rationale for adapting their own approach. Predictive modeling with DRGs can be a powerful tool to build a convincing case for change with these physicians.

From a change management perspective, both category II and category III physicians will benefit from reviewing their progress on an ongoing basis, once they have made the commitment to change.

**Category IV: High cost, low quality of care.** This physician group is clearly detrimental to hospital performance, from both a cost and quality perspective. It is to be hoped that this group will constitute a small percentage of the hospital’s physicians.

### THE PHYSICIAN VALUE MATRIX REVEALS OPPORTUNITIES



Source: PSCI, Inc.

Hospital choices are clear for this category: First, make these physicians aware of their performance and the impact they have on overall hospital performance. They require clear direction on order sets and best practices, and need frequent feedback with performance scores. Some hospitals may require an accelerated performance plan, while other hospitals might choose to terminate the relationship. In either case, quickly moving physicians out of this category will improve overall hospital performance.

From a recruiting perspective, it becomes helpful to explore and compare physician credentials across every category. Attracting physicians with credentials consistent with category I, and avoiding those whose credentials imply category IV could help to improve a hospital’s future overall physician mix.

### Discover the Answer to “What If?”

To ensure the ongoing success of an ACO model, physicians should have ongoing access to intelligence that allows them to compare their own performance, efficacy of diagnosis, and treatment with those of peers—i.e., to evaluate their own performance within the context of evidence-based care. The physician value index is an effective tool to promote such physician self-evaluation.

Despite the valuable insight the index can provide, however, it is inadequate without fuel to drive change. “What-if?” scenarios, or data-driven decision support models, can arm hospitals with the proof physicians need to embrace change. In the past, hospitals relied on financial or quality analysts to collect, normalize, and analyze cost and quality data. Manual processes with immense spreadsheets took weeks and sometimes months to examine. Piecing together a limited number of scenarios was at best cumbersome and often impossible. Today, however, leading hospitals look to data-driven decision support systems to quickly build, compare, and test scenarios.

For example, a hospital may select one order set from among category I physicians and simulate the impact to cost and quality if that order set were standardized across all physician groups. With a cost-quality modeling system in place, an analyst can achieve actionable insight with just a few clicks. The result is a clear understanding of how changes can affect quality and cost by physician, facility, and department.

The same data and “what-if?” scenarios can also help quantify the impact of substituting drugs, devices, implants, or any other element that contributes to cost and quality. A hospital could even, to its advantage, compare cost-quality scenarios to evaluate the benefit of outsourcing different departments. The hospital could blend scenario and predictive analysis to answer questions such as, “What would the 30-day readmission rate be if we were to standardize a given order set from category I physicians?” Regardless of which sce-

narios executives might choose to explore, data-driven decision support models, such as the physician value index, can improve a hospital’s ability to refine cost and quality factors to maximize profitability.

### Creating the Physician Value Index

Creating a physician value index requires two broad steps: building a quality of care (QOC) composite score and gathering cost of care (COC) data.

#### Build a QOC composite score:

- > Remove disparity from quality metrics (30-day mortality, readmission rates, patient satisfaction) and translate each to a metric on a scale of 1 to 100 percent.
- > Classify each quality metric under key performance indicators (KPIs) such as safety, structural, outcomes, process, and patient satisfaction.
- > Map raw quality data at an entity level, where actions can be taken by clinicians, physicians, facilities. Analysis enables the hospital system to make physicians responsible for only the quality measures they can affect.
- > For quality metrics that are collected at an aggregate facility level, use a simple allocation method. For example, if the facility scores a 90 percent in physician intensive care unit (ICU) staffing, then each patient admitted to the ICU also receives a 90 percent score for this measure.
- > For quality metrics that are collected using random samples, use one of two methods:
  - If there are 100 discharges and 10 patients are sampled for patient satisfaction, then the scores for the remaining 90 patients are assigned on the basis of physician and staff, if such information is available. This method assumes that patients have been attended by the same physician and staff has a higher probability of having the same patient satisfaction scores.
  - If there are 100 discharges and 10 patients are sampled for patient satisfaction, then the score for each patient is randomly assigned to 90 nonsampled patients.
- > Assign weights to KPIs based on strategic positioning of the hospital system.
- > Roll up the data by patient, and calculate the QOC composite score by physician.

#### Gather COC data:

- > Collect COC information from each financial system at the care dimension level by patient.
- > Sum up the direct supplies, pharmaceutical, procedure, labor, and overhead costs allocated to the patient care.
- > If there is not a good overhead allocation method, focus only on the direct cost that can be assigned to specific patient care.

### Closing the Loop with Predictive Analysis

Data-driven decision support models are not limited to building “what-if?” scenarios. Soon, Medicare and private payments will be tied directly to quality performance. Hospitals need a way to predict performance in the immediate future so that they can act today to avoid losing future income. Again, looking to cost and quality data, hospital analysts and executives can apply “what-if?” scenarios to predict future performance. For instance, a hospital can ask questions such as, “What kind of patient readmission rates can I expect in 2011 for hip and knee replacement procedures for each case mix? And what’s the overall financial impact to the institution if we standardize certain order sets?” Using the physician value index as a tool to create such scenarios is one way in which hospitals can engage in predictive analysis to help ensure financial success.

### Physician Integration and the Successful ACO

Ultimately, the physician value index is a tool for achieving greater physician integration, because it offers a means for hospitals to identify potential physician leaders to help spearhead integration efforts. But in addition to applying the index to this end, hospital finance leaders can promote many additional steps to ensure their organizations’ success with physician integration. For example, the leaders should:

- > Define processes to promote patient-centric, evidence-based care
- > Seek best-in-class solutions to problems and look often to other industries for insight
- > Pursue transformational business models instead of incremental improvements
- > Believe change can happen when stakeholders align goals and leverage data-driven decision support models for collaboration

> Measure, monitor, report, and predict physician quality of care and cost of care in context with overall hospital financial performance to institutionalize change

To create a physician value index manually would likely overburden existing hospital system resources, or system financial resources.

Hospitals can build a decision support capability or buy off-the-shelf products. Hospital systems that lack deep pockets to invest in IT or do not have large internal information system resources available to manage these applications can successfully leverage a software-as-a-service (SaaS) subscription service that requires no up-front investment for hardware, software, or analyst/clinician resources. The SaaS model removes all IT change management requirements, and most are reasonably priced at \$5,000 to \$10,000 per month, depending on the size of the system or facility.

Sustainable efficiencies will enable today’s hospital to realize long-term business objectives. A new business model that includes physician integration will pave the way for profitability today and beyond 2012, when healthcare reform delivers a wave of significant changes. The physician value index can be a valuable tool for managing the transition to this new reality. ●

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