

Making the Business Case for Quality: Linking Quality and Cost

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This third installment of the four-part series examines the benefits of linking quality and cost by creating an integrated performance measurement scorecard and evaluating potential sources of financial data.

Linking quality improvement efforts with their anticipated financial impact is critical to making an effective business case. It is also essential to achieving a competitive market advantage, considering the increasing prevalence of value-based payments.

In addition to the various Medicare and Medicaid “at-risk” pay-for-performance incentives and penalties, private health insurers and large employers are increasingly seeking exclusive partnerships with providers that consistently demonstrate the “best” value for their members and employees. In other words, payers are rewarding providers that consistently deliver the highest relative quality outcomes at the lowest possible cost.

Beyond monetizing quality improvement efforts and connecting them to the anticipated financial impact with a measurable return on investment (addressed in the second article in this series), healthcare leaders must integrate enterprise quality and cost data to inform timely and effective decision-making. Integrating quality and cost data enables allocating increasingly scarce resources to support aligning the organization’s mission with the business case for it.

To continuously improve value, leaders must recognize that quality and cost are inextricably linked. One usually does not change without impacting the other; however, balanced scorecards or dashboards leaders use to monitor and manage their organization’s performance are often short-term in focus and typically do not integrate quality and financial measures.

INTEGRATED PERFORMANCE MEASUREMENT SCORECARD

Quality measurement reports often do not include the cost of waste associated with poor quality, such as a clinically ineffective or inefficient process. Table 1 presents an

example of how quality and cost can be integrated easily into the same dashboard to improve decision-making effectiveness.

Note that the estimated financial impact for each quality measure is provided on the same line and then summed to identify the total cost of waste and the potential savings or revenue growth opportunities across the portfolio of organizational performance improvement initiatives. Integrating quality and cost in the same performance measurement report can improve decision making in three ways.

1. Presenting both types of data in one place forces leaders and staff to confront the cost of waste stemming from ineffective or inefficient practices or processes.

Recall from the first article (May/June 2022 *PLJ*) that the cost of waste is the total measurable financial impact resulting from poor quality, including potential lost revenue or avoidable expense. Adding the estimated cost of waste to a traditional performance scorecard or dashboard enables translating patient safety and clinical quality gaps into the language of finance. Only then can clinical and non-clinical healthcare leaders fully grasp the total impact of poor quality to identify, discuss, and prioritize measurable and achievable savings opportunities.

2. Physicians as scientists expect and rely on comprehensive and complete data to inform their clinical decision-making.

Integrating quality and cost measures supports frontline providers correlating potentially ineffective practice patterns with the associated financial impact, with which they can consider adopting evidence-based guidelines that simultaneously improve clinical efficacy and cost-efficiency.

Table 1. Integrated Performance Measurement Scorecard

Performance Improvement Initiative	Baseline				Target		
	January 1 - December 31, 20X1				By December 31, 20X2		
	Cases	Rate	Cost per Case	Total Cost of Waste	Cases	Rate	Cost Reduction
C. diff Infection	84	6.0%	\$7,285	\$611,940	42	3.0%	\$305,970
MRSA	43	8.0%	\$6,248	\$268,664	27	5.0%	\$99,968
SSI	11	4.5%	\$23,272	\$255,992	5	2.0%	\$139,632
LWOBS	900	3.0%	\$725	\$652,500	750	2.5%	\$108,750
Re-admissions	78	3.6%	\$7,300	\$569,400	32	1.5%	\$335,800
Clinic no-shows	341	18.0%	\$230	\$78,430	208	11.0%	\$30,590
Total				\$2,371,361			\$1,020,710

Performance							
January 1, 20X1 - December 31, 20X2							
September		October		November		Year-to-Date	
Cases	Cost Savings	Cases	Cost Savings	Cases	Cost Savings	Cases	Cost Savings
5	\$14,570	9	(\$14,570)	4	\$21,855	68	\$116,560
0	\$24,992	1	\$18,744	1	\$18,744	27	\$99,968
1	(\$23,272)	0	\$23,272	1	\$0	5	\$139,632
83	(\$5,800)	61	\$10,150	53	\$15,950	711	\$137,025
2	\$36,500	2	\$36,500	1	\$43,800	51	\$197,100
26	\$460	20	\$1,840	13	\$3,450	216	\$28,750
	\$47,450		\$75,936		\$103,799		\$719,035

Physicians and other providers control — or at least significantly influence — a large portion of healthcare spending. Although they are the only ones who can admit or discharge a patient, order a test or drug, or perform a procedure, most are not apprised of the cost implications from their practice patterns.

Financial information presented to providers at the point of ordering can have a meaningful impact. In a randomized controlled study conducted at Johns Hopkins Hospital, physicians who were given cost information when ordering certain lab tests reduced orders for ostensibly unnecessary tests, waste, and cost without compromising clinical outcomes.¹ Presumably, this approach would have a similar beneficial impact in other clinical settings.

3. Monetizing the anticipated financial impact of performance improvement initiatives supports more focused strategic planning and prioritization.

Leaders can more accurately forecast cost during the financial planning cycle by identifying the anticipated total cost of waste across the organization. Also, quality improvement initiatives that have the greatest impact on clinical

outcomes, safety, patient experience, and cost savings can be prioritized to achieve the organization's strategic goals.

The potential impact on the organization's financial health can support investment in substantial and sustainable quality improvement efforts. In other words, quality begets quality.

DATA-RICH, INFORMATION-POOR (DRIP)

Cultivating, collecting, and reporting valid and reliable financial data is a common rate-limiting factor to integrating quality and cost. In fact, most executives admit they lack a cost accounting system capable of providing the necessary financial data across the continuum of care.² Clinical leaders therefore are rightfully reluctant to rely on any cost data shared about their practice patterns, especially if the data are not risk-adjusted to reflect the relatively higher cognitive and other resources required to treat patients who are sicker.

Despite the challenges of translating big data into informed decision-making, even rudimentary efforts to link cost and quality can have a meaningful impact. Acknowledging that “perfect” data do not exist, leaders should not compromise “good enough” for great, or otherwise be

deterred from incorporating reasonably accurate financial data to estimate and report the cost of waste. Using common and conservative financial data collection methods with reasonable assumptions supports reliable and defensible estimates.

SOURCES OF DATA FOR DETERMINING FINANCIAL IMPACT

Several potential sources of financial information can be used, ideally in combination, to calculate and validate the estimated total cost of waste and the potential savings from a planned quality improvement initiative. They include (1) activity-based costing, (2) cost-to-charge ratio, (3) manual data collection, and (4) published research or white paper.

Activity-based Costing

Data provided from an activity-based cost (ABC) accounting system are usually the most useful for estimating costs, particularly across multiple complex services or service lines. ABC assigns direct and indirect operating costs to a specific and discrete unit of service, such as a test, procedure, clinic visit, or inpatient admission.

Despite its value, a robust cost accounting and reporting system can be labor and resource intensive to develop. Other, reasonable approaches, albeit less accurate and more time consuming, can be applied to support estimating costs.

Cost-to-Charge Ratio

The cost-to-charge ratio (CCR) is determined by dividing the costs to provide services by what the organization charges. CCR generally is used with inpatient or outpatient hospital services. The closer the ratio is to one, the less difference there is between actual costs and charges. Multiplying the cost-to-charge ratio by total charges provides an estimate of the cost of the service.

The example in Table 2 shows the estimated cost for a hip replacement procedure using the CCR method. While the CCR is a simple approach that can be used to estimate total cost of a service, it does not identify the cost of waste, which must be estimated using internal or external best practice benchmarks. Therefore, some manual data collection is required to identify and differentiate ideal quality outcomes with poor quality.

Table 2. Calculating Cost Using Cost-to-Charge Ratio

Number of hip replacements per month	30
Total charges (gross)	\$900,000
Average charge per procedure	\$30,000
Cost-to-charge ratio	40%
Estimated cost per procedure	\$12,000

Manual Collection

Capturing the cost of waste manually can be time consuming and tedious, yet usually insightful when attempting to reasonably estimate the financial impact of an ineffective or inefficient practice or process. It is also a better alternative to doing nothing.

Manually calculating the cost of waste typically involves aggregating pieces of disparate data from multiple systems, such as from financial and operating activity statements, human resources payroll, and supply chain invoices. A common example of manual data collection is a chart audit.

Reviewing clinical charts provides important data that can be translated into useful financial information. For example, a chart audit can support identifying the adverse financial impact of treating a hospital-acquired condition, such as *Clostridium difficile* infection (CDI), by comparing a random sample of charts with and without the infection.

As Table 3 shows, the same risk-adjusted diagnosis should be used to randomly draw at least 30 charts for each status to ensure the results are statistically significant.

Table 3. Estimating the Cost of Waste from Conducting a Chart Review

DRG195 Simple pneumonia and pleurisy w/o CC/MCC Modifier A04.72 <i>Clostridium difficile</i> not specified as recurrent	CDI not present on admission	CDI present on admission
	n = 30 charts	
Average length of stay	3.0 days	4.5 days
Total cost of care	\$9,000	\$13,500
Total cost of waste	\$225,000	

The cost for a length of stay from a specific diagnosis is a reasonable proxy to determine the total cost per patient day or bed day. Assume in this example a \$3,000 total direct and variable cost per bed day. Multiplying the length of stay of CDI “not present on admission” and subtracting the result from multiplying the length of stay of CDI “present on admission,” the cost of waste from the additional 1.5 days is \$4,500 per day. Extrapolating the total cost of waste and potential savings opportunity, if the organization can reduce by half 100 episodes of hospital-acquired CDI, the potential annual savings would be \$225,000.

Scholarly Article or White Paper

Using published reports in a white paper from a vendor or trade association or a research study from a scholarly journal can provide another source of cost information. However, recognize that reports from vendors or consultants may be inherently biased in favor of supporting a specific product or service.

Mining translatable financial information from journal articles is also a challenge because few include cost

information. The information may not be relevant when the article is available due to the significant research publication lag. Nonetheless, both sources can be used as a reasonable check of the data identified in one of the previous methods.

CONCLUSION

Quality guru Philip Crosby observed that “It is always cheaper to do the job right the first time.” The beneficial impact on leading indicator includes improving clinical outcomes and the patient experience while reducing unnecessary waste and associated cost — the lagging indicator. The resulting savings can be reinvested to drive further sustainable performance improvement.

Notwithstanding avoiding increased medical-legal risk and regulatory compliance penalties, measuring and reporting the financial impact from both desirable evidence-based and poor quality practices drives improved leadership decision-making. What’s more, integrating quality and cost data supports leaders’ strategic and financial planning and prioritization to support their mission.

The next and final article in this series will address how to overcome common barriers to getting a business case approved and implemented, including risk aversion and financial austerity. ■■

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