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## the 4 phases of quality maturity

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Quality-of-care improvements are often the result of hospitals taking a trip through four phases of quality transformation.



Poor hospital practices and processes are like cancer: It's sometimes difficult to know just how bad things are until the condition turns fatal. Safety, outcome, and patient satisfaction metrics may signal the need to accelerate quality performance from a system perspective. Hospital finance leaders should understand, however, that healthcare organizations cannot become quality leaders overnight: They must help guide their organizations through an evolutionary process involving several phases to achieve a level of quality maturity in which quality becomes a strategic competency.

Accomplishing this purpose requires a clear understanding of how hospitals mature along the quality evolutionary continuum. For this reason, we reviewed publicly available financial data, quality outcomes, and patient satisfaction data, as well as data from 135 acute care hospitals.<sup>a</sup> The analysis also included quantitative and qualitative surveys with 20 hospital systems and a review of published best practices case studies.

### Quality Maturity Model

Hospital systems that achieve quality as a strategic competency go through four phases of transformation to achieve “quality nirvana”—the

ability to prioritize quality improvement (QI) programs and process improvements that have the greatest impact on patient satisfaction and hospital financial performance. The time needed to achieve “strategic” status depends on senior management commitment, reengineering processes, process enablement using technology, and grass-roots change management.

Although certain characteristics distinguish each phase of transformation, the quality maturity of some processes, DRGs, and service lines—such as pressure ulcer prevention, cardiac arrest, and stroke prevention—has the potential of being greater than others. To be considered “strategic” and enjoy full financial and competitive value, hospitals must achieve Phase IV across all major service lines, departments, processes, and DRGs. Within each phase in the evolutionary continuum, the hospital develops solutions to specific issues and encounters problems pointing to the next phase. Hospitals that tackle each phase experience tangible and holistic change that has quantifiable impact on total system quality and financial performance. Each phase provides greater market advantage than previous phases.

An organization's current objectives, focus, leadership, metrics, and budget must be examined to diagnose where the organization resides on this continuum. Knowing how far an organization has evolved in terms of quality validates current

a. In this article, “peer group” refers to 135 large acute care hospitals that belong to multifacility systems, as identified by Thomson Reuters' June 21, 2010, study *100 Top Hospitals: Health System Benchmarks*.

performance and provides direction to achieve best-in-class performance.

To understand why a hospital system's market and financial advantage increases as its quality organization evolves through the four phases, it is necessary to explore each phase's dynamics and the effect of those dynamics on market advantage.

### Phase I: Reporting

Phase I focuses on quality reporting. Individuals within clinical departments or operations focus on tactical issues and make all critical decisions with minimal input. Quality managers describe their job as "collect, measure, report," spending 60 to 80 percent of their time on chart extraction, data cleansing, and generating reports. Phase I quality managers lack job satisfaction and do not understand their impact on overall financial performance. They operate in the shadows of clinical and operations teams, struggling to prove their contributions.

At this phase, disparate quality teams operate in silos within their respective facilities in a multi-facility hospital system. At the facility level, a director of quality leads the department and reports to the chief medical officer (CMO) or chief nursing officer (CNO). There is no

"corporate" position for quality, and teams act with autonomy within their facility. Because each hospital's quality team is generally understaffed, it is difficult to gauge the team's financial contribution or impact.

At Phase I, no defined outcome-based processes, goals, and methodologies exist to identify and prioritize quality opportunities. The quality team rarely has credible result measurements or success stories to share with senior management. Performance metrics revolve around productivity—e.g., number of measures reported by DRG, on-time delivery of reports, and number of errors.

Chart extraction with Excel spreadsheets are the norm. Data are manually extracted by reviewing clinical charts. Funding for quality roles and positions falls on a facility cost center.

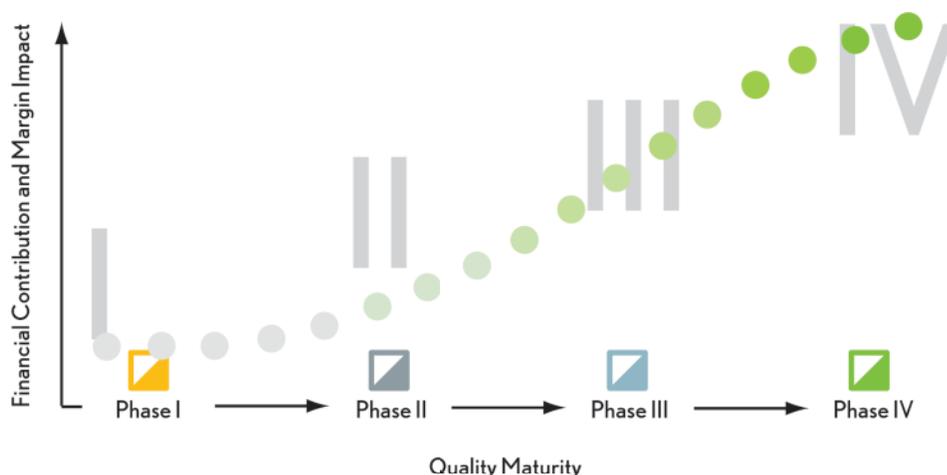
Quality teams have difficulty attracting individuals with clinical and analytical backgrounds who understand the quality data. The labor-intensive task of collecting data from disparate systems makes it error-prone. Data management is cumbersome, leaving no time for meaningful analysis and criticism exists that reports and charts are often subjective and unreliable.

### AT A GLANCE

Evaluating a hospital's quality performance involves several key considerations:

- > What drives the hospital's quality-of-care scores, and what are the underlying drivers of its outcomes and patient satisfaction?
- > How does the hospital's quality and cost of care compare with those of its peers?
- > Does the organization have a road map for predictable quality improvement?
- > How do quality improvement initiatives affect financial performance?
- > Does the chief quality officer (CQO) have a "seat at the table" in boardroom meetings?
- > Does the strategic plan include quality goals?
- > Does the hospital possess analytical tools to measure and understand quality of care with a holistic view and in financial context?

### QUALITY MATURITY MODEL



Source: PSCI, Inc.

QUALITY MATURITY MODEL: PHASE CHARACTERISTICS			
Phase I	Phase II	Phase III	Phase IV
"Reporting"	"Compliance"	"Processes & Variance"	"Institutionalize Quality"
Laggards	Followers	Leaders	Innovators
<ol style="list-style-type: none"> <li>1. Focus on external quality reporting</li> <li>2. Measure department productivity</li> <li>3. Focus on data collection efficiencies</li> </ol>	<ol style="list-style-type: none"> <li>1. Focus on quality compliance</li> <li>2. Seek cross-functional quality alignment</li> <li>3. Focus on ad hoc physician integration</li> <li>4. Minimize measurement errors</li> </ol>	<ol style="list-style-type: none"> <li>1. Focus on internal quality improvement projects</li> <li>2. Facilitate change management</li> <li>3. Monitor and report of project success</li> <li>4. Focus on process-driven physician integration</li> </ol>	<ol style="list-style-type: none"> <li>1. Focus on hospital margin improvement</li> <li>2. Focus on pay-for-performance, patient satisfaction, clinical-financial alignment, physician integration</li> <li>3. Link quality of care to cost of care, report impact of quality improvement activated on margin</li> <li>4. More use of physician scorecards</li> </ol>
Improve Productivity	Improve Quality Scores	Link Cost-Quality	Maximize Quality-Revenue Curve
<ul style="list-style-type: none"> <li>• Tactical</li> <li>• Director of quality</li> <li>• Facility cost center</li> </ul>	<ul style="list-style-type: none"> <li>• Project orientation</li> <li>• Vice president of quality</li> <li>• Shared service center</li> </ul>	<ul style="list-style-type: none"> <li>• Process orientation</li> <li>• Chief quality officer</li> <li>• Shared service center</li> </ul>	<ul style="list-style-type: none"> <li>• Strategic orientation</li> <li>• Chief quality officer</li> <li>• Revenue center</li> </ul>

Source: PSCI, Inc.

Phase I hospitals typically show negative operating margins. Their overall patient satisfaction scores are 3 percent below their peers, on average. The 30-day mortality rates and 30-day readmission rates are 3 percent higher, on average, than those of their peer group. Operating revenue per bed is 17 percent below the peer group average.

**Phase II: Compliance**

By Phase II, quality managers describe their job responsibilities as “collect, measure, analyze, and report quality scores,” and they are eager to identify quality improvement opportunities. The Phase II quality team spends 40 to 60 percent of its time on data analysis. When time allows, the team attempts to identify quality improvement opportunities. A Phase II quality manager’s chief complaint is spending inordinate time to collect and cleanse data before analyzing. At this stage, the focus is on measurement over hospital system financial value.

Often, Phase II groups assume the phrase “quality improvement” as part of their titles, and they typically enjoy a growing respect and credibility among clinicians, operations, physicians, and the executive team. They have started working on cross-functional teams as reporters of quality data, helping identify problem areas, and tracking progress on quality projects.

Phase II quality groups build partnerships with key departments on some critical DRG categories and occasionally share anecdotal success stories. Throughout Phase II, quality impact is recognized but not institutionalized because success is intermittent and a result of skills of one or several individuals.

There is some ambition to centralize quality efforts across the system, but in most cases, Phase II quality groups still operate in silos within each facility. Each group is led by a vice president of quality who has a nursing

background and can drive clinical change. The quality team now boasts more people with nursing backgrounds. These professionals interpret data analysis in clinical terms, identify quality improvement projects, and communicate with physicians, clinicians, and departments. At some point in Phase II, hospital systems begin placing a few team members at the system level to meet regulatory compliance reporting standards (e.g., those established by the Centers for Medicare & Medicaid Services and the Joint Commission). If the chief quality officer (CQO) position exists, this individual does not have a seat in the boardroom and is a figurehead.

Phase II metrics involve compliance, with core measures and performance compared with that of peers. Data are transparent to consumers, payers, and regulatory bodies. Quality department metrics are volume-based (e.g., number of projects initiated, project team feedback, weekly monitoring, and reporting).

Quality teams begin leveraging project management tools to monitor progress on individual projects. Charts, spreadsheets, and databases are used for data analysis instead of business intelligence and decision support tools. Team members are frustrated about lack of applications, which forces them to spend disproportionate time analyzing data rather than focusing on quality improvement projects.

At this point on the evolutionary continuum, project cycle times are long and change management is superficial because in-depth cost and quality analysis does not exist. On the other hand, stakeholders demand insight on key quality drivers and the impact of improvement initiatives on financial performance. Quality teams struggle to quantify or articulate sophisticated metrics.

Our research suggests that the majority of U.S. hospitals fall within Phase II. On average, Phase II hospitals have break-even operating margins and 30-day mortality and 30-day readmission rates are 2 percent and 1 percent higher than the peer group, respectively. Operating efficiency

measured in terms of operating revenue per bed is 4 percent below that of the peer group. Phase II hospitals manage operating efficiencies better than Phase I hospitals and enjoy 3.3 percent higher operating margins. However, overall patient satisfaction scores, as measured by CMS's Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, are on par with the peer group average.

### Phase III: Processes and Variance

With 60 percent or more of a Phase III quality manager's time spent on quality improvement project planning and development activities, the quality team will share frequent success stories with senior management. Quality managers describe their job responsibilities as "track, analyze, and monitor hospital quality performance and variance analysis." The quality team works with physicians using data to break down silos, eliminate inefficiencies, and drive change. Quality teams see links between cost and quality and pinpoint value drivers among various departments. The team perceives patient needs as an integral part of quality influence and responsibility. We now see early-stage cost-quality modeling and data-driven, fact-based dialogue with physicians and clinicians.

A CQO reports to the CEO and heads a centralized quality organization, overseeing department quality managers or directors. The CQO may have a seat in the boardroom, and quality improvement discussions are on the board's agenda. The CQO, a well-respected physician with an extensive background and vision, is expected to deliver a sustainable transformation and has a "quality as a way of life" mission. The CQO is a process-oriented systems thinker who believes process reengineering should revolve around the patient. All major processes are evaluated and redesigned to improve metrics, such as patient satisfaction, safety, and outcomes.

Quality teams now define "quality of care" as a comprehensive composite score that incorporates readmission, infections, preventable cases of harm, CMS core metrics, and several key

performance indicators. The composite quality-of-care score is derived by assigning an appropriate weight to each KPI based on system strategic goals. Compiling the composite quality-of-care score becomes a strategic activity that involves the CFO, CMO, CNO, COO, and others on the executive management team.

A hospital in Phase III clearly articulates the correlation between the composite quality score, outcomes, and costs. The Phase III quality team is challenged by showing how realized quality improvement and cost savings fare against goals. They keep compliance in mind when identifying performance outliers and making quality decisions. The team's compensation is often based on quality and financial improvement. Failure at this point in the evolution is due to poor leadership choices or the inability to implement system thinking throughout the organization.

Hospital systems in Phase III make significant investments in automated quality measurement using quality-of-care and cost-of-care decision support tools. The objective is to help quality staff focus on value-added strategic activities and automate or outsource data collection, cleansing and normalization, analysis, and reporting. Most of the quality staff focuses on designing, executing, monitoring, and measuring quality improvement projects.

There has been vast improvement over Phases I and II, but this team has challenges. The team has excellent databases, but lacks genuine analytic tools that helps establish the link between quality complexities and financial performance. The team insists that its job is too complex, and that it requires more sophisticated tools to be able to truly identify trends and problems at an early stage. It is impossible to predict the success of any given improvement program, and the team is still "feeling its way in the dark."

The research findings suggest that most current leaders in the hospital industry are in Phase III. Phase III hospitals have average operating margins of 7.3 percent compared with the peer average of 2.2 percent. Their overall patient satisfaction scores are 2 percent higher than those of the peer group. Thirty-day mortality and 30-day readmission rates are 2.3 percent and 2 percent better than the peer group, respectively. Operating efficiency in terms of operating revenue per bed is 12 percent better than the peer group average.

**Phase IV: Institutionalize Quality**

Phase IV teams focus on institutionalizing processes and evidence-based practices. "Better than peers" is not a basis for comparative effectiveness. "Best-in-class" is not just a clinical priority—it's the singular target and business

QUALITY MATURITY MODEL: TECHNOLOGY ENABLERS			
Phase I	Phase II	Phase III	Phase IV
"Reporting"	"Compliance"	"Processes and Variance"	"Institutionalize Quality"
Laggards	Followers	Leaders	Innovators
1. Data collection tools 2. Data normalization	1. Project management tools 2. Spreadsheets 3. Access and other databases	1. Quality-of-care analysis—detailed quality visibility in context of cost 2. Cost-of-care analysis—detailed cost and resource utilization; process analysis in context of quality 3. "What if" analysis—quality-cost modeling and predictability 4. Quality optimization—prioritization and allocation of resources to maximize quality improvement projects' ROI	

Source: PSCI, Inc.

strategy to improve hospital margins through market share and increased revenue, or a lower cost structure with a patient-centric approach. National initiatives are considered the minimum requirement rather than the winning formula. This team strives to identify best processes and looks for variances against “gold standards.”

In Phase IV, quality teams identify problems at an early stage before they affect key performance indicators or the composite quality score. Planning, analysis, risk management, and process development occupy 80 percent of the time, and individuals describe their job as “creating value.” They deliver value by modeling quality and cost for a competitive hospital system that factors patient risk and physician integration across the care continuum. The entire organization is poised to become an accountable care organization (ACO) and is a leader in quality initiatives throughout the care continuum. The organization uses scenarios to accurately predict quality, risks, and financial impact.

Quality professionals do not just “recognize” the importance of patient needs, as in Phase III. Patient needs are an integral part of the quality equation, including risks, flexibility, cost-to-serve, and several other factors.

The quality team is a business partner with physicians, finance, clinicians, and operations. The team and individuals are considered the key architect of the hospital quality-of-care value chain. When the executive team begins to claim quality as a key to market advantage and business success, the ultimate goal is dynamic alignment of quality strategies with system business strategies.

In Phase IV, the CQO has a direct impact on profitability and has strategic value similar to that of the CFO. The charter is to make quality excellence a vital part of the hospital system’s DNA. The CQO works with executive leadership to link quality objectives and goals to support hospital system strategic plans. By this time, the CFO is a champion of CQO activities and supports efforts

to correlate cost and quality metrics with clinical and financial success.

Every department has quality-related goals and performance metrics that support the composite quality score. Measureable, tangible goals form the basis for compensation as the entire leadership team becomes accountable.

The quality team can now correlate quality of care and cost of care and quantify the financial impact of quality improvement projects. The team shows margin contributions at a granular level, by facility, DRG, physician, and other dimensions. Metrics are tightly linked to improvements in outcomes, process variance, patient safety, medication, environment, and satisfaction.

The most sophisticated decision support analysis tools show quality within a financial context. They “drill down” to discover trends and offer statistically significant information to support dialogue with physicians for effective change management. Scenarios, predictive analysis, and optimization tools pave the way for order set standardization, resource allocation, and process redesign.

Phase IV hospitals are pioneers in process maturity and “system-thinking” and closely align quality processes with financial goals. Not surprisingly, few hospitals are even in the earliest stages of Phase IV. These few hospitals have consistent operating margins between 13 and 15 percent. Overall patient satisfaction scores are 8 points higher than those of Phase I hospitals, while 30-day mortality and 30-day readmission rates are 11 percent and 8 percent higher, respectively. Phase IV operating revenue per bed is typically 30 percent higher than the peer average.

### Observations and Recommendations

Research shows that healthcare providers have a long journey to drive quality-of-care improvements into positive hospital financial performance. Most large hospital systems fall within Phase II of the quality evolutionary continuum. Small, single-facility hospitals are typically not

PATIENT SATISFACTION AND CLINICAL OUTCOME SCORES: VALUE AND IMPACT TO HOSPITAL



Source: PSCI, Inc.

well funded and fall in Phase I. A significant percentage of innovative hospital systems fall in the middle of Phase III, and very few hospitals are even in the early stages of Phase IV.

A good indicator of an organization’s quality maturity is the quantitative tools it uses for measurement, decision support, planning, change management, and predictive analysis. Investing in analytical tools demonstrates which organizations are institutionalizing best processes and practices. Investing in decision-support systems follows a leadership vision, process engineering, and organizational commitment to a long-term, holistic approach to financial improvement by delivering high quality to patients.

By 2013, Phase IV innovative quality leaders will have made investments in people, processes, and technologies to support strategic quality transformation. They will emerge as market leaders and leverage turmoil in the market. At that time, mature Phase III and Phase IV hospitals will win the ACO market battles. Most quality leaders will use their quality advantage to acquire and

consolidate underperforming hospital systems. A consolidation and integration strategy leveraging technology-enabled infrastructure could help hospitals that are lower on the quality continuum “leapfrog” from Phase I or II to Phase III quickly.

Determining how far a hospital system has evolved in terms of quality ultimately requires quality leaders to prepare with analytical tools and capabilities to achieve market advantage. ●

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