



# Metrics for the Second Curve of Health Care

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## Metrics for the Second Curve of Health Care

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**Contact:** [hpoe@aha.org](mailto:hpoe@aha.org) (877) 243-0027

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## Executive Summary

In 2011, the AHA Board Committee on Performance Improvement (CPI) identified ten must-do strategies for the hospital field to implement in order to survive and thrive in the transforming health care system. These strategies were identified in the groundbreaking report, *Hospitals and Care Systems of the Future*, found at <http://www.aha.org/about/org/hospitals-care-systems-future.shtml>.

Building off of health care futurist Ian Morrison’s first curve to second curve shift, CPI identified characteristics of the first curve (the volume-based curve) and the second curve (the value-based curve). Of the ten must-do strategies, four were identified as major priorities for health care leaders. “Metrics for the Second Curve of Health Care” expands on those strategies, focusing on the four imperative strategies:

1. Aligning hospitals, physicians and other clinical providers across the continuum of care
2. Utilizing evidence-based practices to improve quality and patient safety
3. Improving efficiency through productivity and financial management
4. Developing integrated information systems

In addition, there is another report hospitals and health care systems can use to self-assess and provide a road map on the first curve to second curve transition at <http://www.hpoe.org/future-roadmap-1to4>.

*Table 1: Second Curve Evaluation Metrics (applicable to the hospital or the health care system)*

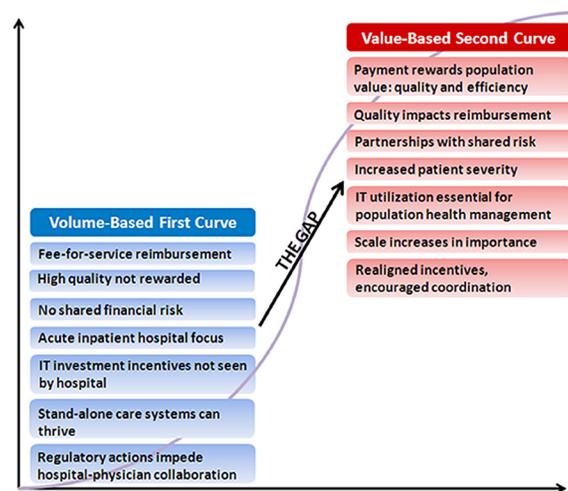
<b>Strategy One: Aligning Hospitals, Physicians and Other Clinical Providers Across the Continuum of Care</b>
<i>Percentage of aligned and engaged physicians</i>
<i>Percentage of physician and other clinical provider contracts containing performance and efficiency incentives aligned with ACO-type incentives</i>
<i>Availability of non-acute services</i>
<i>Distribution of shared savings/performance bonuses/gains to aligned physicians and clinicians</i>
<i>Number of covered lives accountable for population health (e.g., ACO/patient-centered medical homes)</i>
<i>Percentage of clinicians in leadership</i>
<b>Strategy Two: Utilizing Evidence-Based Practices to Improve Quality and Patient Safety</b>
<i>Effective measurement and management of care transitions</i>
<i>Management of utilization variation</i>
<i>Reducing preventable admissions, readmissions, ED visits, complications and mortality</i>
<i>Active patient engagement in design and improvement</i>
<b>Strategy Three: Improving Efficiency through Productivity and Financial Management</b>
<i>Expense-per-episode of care</i>
<i>Shared savings, financial gains or risk-bearing arrangements from performance-based contracts</i>
<i>Targeted cost-reduction and risk-management goals</i>
<i>Management to Medicare payment levels</i>
<b>Strategy Four: Developing Integrated Information Systems</b>
<i>Integrated data warehouse</i>
<i>Lag time between analysis and availability of results</i>
<i>Understanding of population disease patterns</i>
<i>Use of electronic health information across the continuum of care and community</i>
<i>Real-time information exchange</i>

Source: AHA, 2013.

# Introduction

Hospitals and health care systems face common challenges in transitioning to a health care delivery system characterized by value-based payment focused on outcomes, population health management and a patient-centered, coordinated care-delivery approach. As hospitals and health care systems shift from the volume-based first curve to the value-based second curve, they must transform their business and health care delivery models to balance quality, cost, patient preferences and health status to achieve real value and outcomes.<sup>1</sup> Hospitals and health care systems that are moving to the second curve use performance metrics to identify clinical, financial, cultural and process improvements; incorporate appropriate incentives; and evaluate results. The AHA *Hospitals and Care Systems of the Future* report from 2011 (found at <http://www.aha.org/about/org/hospitals-care-systems-future.shtml>) outlined 10 must-do strategies, with four high-priority strategies required to be successful in the transformation from the first curve to the second curve.

Figure 1: First Curve to Second Curve



Source: Adapted from Ian Morrison, 2011.

This guide builds on the first report further detailing each of the four high-priority strategies and creating specific metrics to evaluate progress toward the next generation of essential hospital management competencies. Table 2 outlines the second curve evaluation metrics for the four high-priority strategies. The four high-priority strategies detailed in this report (bolded) and the additional six must-do strategies are:

- 1. Aligning hospitals, physicians and other clinical providers across the continuum of care**
- 2. Utilizing evidence-based practices to improve quality and patient safety**
- 3. Improving efficiency through productivity and financial management**
- 4. Developing integrated information systems**
5. Joining and growing integrated provider networks and care systems
6. Educating and engaging employees and physicians to create leaders
7. Strengthening finances to facilitate reinvestment and innovation
8. Partnering with payers
9. Advancing an organization through scenario-based strategic, financial and operational planning
10. Seeking population health improvement through pursuit of the “Triple Aim”

Table 2: Second Curve Evaluation Metrics (applicable to the hospital or the health care system)

<b>Strategy One: Aligning Hospitals, Physicians and Other Clinical Providers Across the Continuum of Care</b>	
<i>Percentage of aligned and engaged physicians</i>	
All affiliated physicians are aligned across all dimensions (structural relationships, financial interdependence, culture, strategic collaboration).	
All affiliated and employed physicians are engaged, collaborative and participative in all major strategic initiatives.	
Physician engagement survey data has been analyzed and improvement actions have been implemented with positive results.	
Recruiting and contracting include an assessment of cultural fit as well as a formalized “compact” or code of conduct with mutually agreed on behaviors, values and mission for all physicians.	
<i>Percentage of physician and other clinical provider contracts containing performance and efficiency incentives aligned with ACO-type incentives</i>	
Significant level of reimbursement risk associated with new payment models (bundled payments, two-sided shared savings with both upside and downside risk, or capitation payments).	
Participating in an ACO or PCMH model across a significant population, utilizing value-based incentives.	
All payment contracts, payment and compensation models are linked to performance results.	
<i>Availability of non-acute services</i>	
Full spectrum of ownership, partnership or affiliation of health care services available to patients.	
<i>Distribution of shared savings/performance bonuses/gains to aligned physicians and clinicians</i>	
All clinicians’ performance is measured and they receive benchmark data on performance against peers.	
Most clinicians share financial risk and rewards linked to performance, and many have received distributions of shared savings or performance bonuses.	
<i>Number of covered lives accountable for population health (e.g., ACO/patient-centered medical homes)</i>	
Active participation in a population health management initiative (e.g., chronic disease management, prevention) for a defined population.	
Able to measure the attributable population for health management initiatives and a sizable population is enrolled.	
<i>Percentage of clinicians in leadership</i>	
Active clinical representation at the leadership or governance level (30 percent or above).	
Physicians and nurse executives are leading development of strategic transformation initiatives.	
<b>Strategy Two: Utilizing Evidence-Based Practices to Improve Quality and Patient Safety</b>	
<i>Effective measurement and management of care transitions</i>	
Fully implemented clinical integration strategy across the entire continuum of care to ensure seamless transitions and clear handoffs.	
Fully implemented use of multidisciplinary teams, case managers, health coaches and nurse care coordinators for chronic disease cases and follow-up care after transitions.	
Measurement of all care transition data elements. Data is used to implement and evaluate interventions that improve transitions.	
<i>Management of utilization variation</i>	
Regular measurement and analysis of utilization variances, steps employed to address variation and intervention effectiveness analyzed on a regular basis.	
Providing completely transparent, physician-specific reports on utilization variation.	
Regular use of evidence-based care pathways and/or standardized clinical protocols on a systemwide basis for at least 60 percent of patients.	

<i>Reducing preventable admissions, readmissions, ED visits, complications and mortality</i>
Regular tracking and reporting on all relevant patient safety and quality measures.
Data commonly used to improve patient safety and quality, with positive results observed.
<i>Active patient engagement in design and improvement</i>
Regular use of patient-engagement strategies such as shared decision-making aids, shift-change reports at the bedside, patient and family advisory councils and health and wellness programs.
Regular measurement or reporting on patient and family engagement, with positive results.
<b>Strategy Three: Improving Efficiency through Productivity and Financial Management</b>
<i>Expense-per-episode of care</i>
Tracking expense-per-episode data across every care setting and a broad range of episodes to understand the true cost of care for each episode of care.
<i>Shared savings, financial gains or risk-bearing arrangements from performance-based contracts</i>
Measuring, managing, modeling and predicting risk using a broad set of historical data across multiple data sources (e.g., clinical and cost metrics, acute and non-acute settings).
Implementing a financial risk-bearing arrangement for a specific population (either as a payer or in partnership with a payer).
<i>Targeted cost-reduction and risk-management goals</i>
Implemented targeted cost-reduction or risk-management goals for the organization.
Instituted process re-engineering and/or continuous quality-improvement initiatives broadly across the organization and demonstrated measurable results.
<i>Management to Medicare payment levels</i>
Projected financial impact of managing to future Medicare payment levels for the entire organization; cost cuts to successfully manage at that payment level for all patients.
<b>Strategy Four: Developing Integrated Information Systems</b>
<i>Integrated data warehouse</i>
Fully integrated and interoperable data warehouse, incorporating multiple data types for all care settings (clinical, financial, demographic, patient experience, participating and non-participating providers).
<i>Lag time between analysis and availability of results</i>
Real-time availability for all data and reports through an easy-to-use interface, based on user needs.
Advanced data-mining capabilities with the ability to provide real-time insights to support clinical and business decisions across the population.
Advanced capabilities for prospective and predictive modeling to support clinical and business decisions across the population.
Ability to measure and demonstrate value and results, based on comprehensive data across the care continuum (both acute and non-acute care).
<i>Understanding of population disease patterns</i>
Robust data warehouse, including disease registries and population disease patterns to identify high-risk patients and determine intervention opportunities.
Thorough population data warehouse that measures the impact of population health interventions.
<i>Use of electronic health information across the continuum of care and community</i>
Fully integrated data warehouse with advanced data mining capabilities that provides real-time information in order to identify effective health interventions and the impact on the population.
<i>Real-time information exchange</i>
Full participation in a health information exchange and utilizing the data for quality improvement, population health interventions and results measurement.

Source: AHA, 2013.

*Metrics for the Second Curve of Health Care* enables hospital leaders to evaluate current position and progress along the continuum toward meeting second-curve metrics. It also provides organizations (or organizations in affiliation with other partners) with guidance on measures to help them assess potential gaps and provide a road map for planning future improvements. Additionally, the AHA, through its performance improvement strategy, *Hospitals in Pursuit of Excellence*, develops educational resources, including best practices, to help hospitals and health care systems bridge any gaps and successfully navigate the transformation to the second curve.

The time frame for transitioning to the second curve may be dependent on each hospital's or health care system's marketplace, but significant transformation across the health care field is expected to occur in the next three to five years. Some markets are moving more quickly toward the second curve, based on payer, competitor and other market pressures; others are moving more slowly.

Moving too quickly could have a negative impact on margin or other operations as organizations shift from volume-based reimbursement approaches to value-based payment approaches. The speed of transformation also is dependent on the organization's resources or the resources provided through the organization's partnerships or affiliations. However, this report provides direction to prepare for future capability development (either individually or with a partner/affiliation). Regardless of the market or where the health care organization falls on this continuum, it is important to strive for quality improvement, increased efficiency and IT capability development in order to move to a value-based care approach.

## Strategy One: Aligning Hospitals, Physicians and Other Providers Across the Continuum of Care

It is increasingly important to align, engage and integrate providers into the organization. Second-curve hospitals and health care systems have clear physician/provider performance measures tied to payment incentives. Increasingly, provider contracts are incorporating performance rewards that are aligned with accountable care organization-type incentives. These incentives focus on quality, efficiency, patient experience, care coordination, population health management, patient safety and at-risk population care. Hospitals that form Medicare ACOs operate under a different set of rules and legal restraints than private sector ACOs, including antitrust laws, information privacy and security concerns and insurance regulation with the assumption of risk.

Successful alignment includes the availability and integration of non-acute services. Non-acute services include chronic disease management, preventive medicine, outpatient services, rehabilitation care, behavioral health and long-term care. As a result, alignment with multidisciplinary teams, including acute care and non-acute care providers, and non-clinical staff is necessary. When successful alignment occurs across the care continuum, all responsible parties are accountable and work under a care system with a patient-centered approach that rewards performance.<sup>2</sup>

One approach to improve provider alignment is strengthening providers' strategic relationships with hospitals and health care systems. Physicians are seeking employment and other affiliations with hospitals and health care systems due to the ever-increasing administrative costs, regulatory burdens and the difficulty of remaining a financially viable independent practice.<sup>3</sup> Additionally, as health care organizations move to provide care to populations across the entire continuum, they are seeking stronger relationships with primary care and non-acute care providers. To increase engagement, hospitals and health care systems also are increasing the number of clinicians in leadership positions.

Table 3 provides six evaluation categories, or criteria, that hospital or health care systems can use to track progress toward the first high-priority strategy. Accompanying each criterion are detailed metrics that hospitals and health care systems can use to evaluate their progression from the first curve to the second curve.

*Table 3: Evaluation Metrics for Strategy One (applicable to the hospital or the health care system)*

<b>First Curve 1.0</b> <b>Transitioning in the Gap</b> <b>Second Curve 2.0</b>		
<i>Percentage of aligned and engaged physicians</i>		
<b>Limited</b> structural physician alignment that exists through relationships (ownership, partnership, affiliation) or other collaboration.	<b>Moderate</b> degree of physician alignment with some financial interdependence, structural relationships or collaboration on strategic initiatives.	<b>All</b> affiliated physicians are aligned across all dimensions (structural relationships, financial interdependence, culture, strategic collaboration).
<b>Minimal</b> level of engagement and collaboration among affiliated and employed physicians on strategic initiatives.	<b>Moderate</b> degree of engagement and collaboration among affiliated and employed physicians on strategic initiatives.	<b>All</b> affiliated and employed physicians are engaged, collaborative and participative in all major strategic initiatives.
Physicians <b>have not</b> been surveyed on engagement.	Physician engagement survey data <b>has been analyzed</b> ; however, no corrective actions have been implemented.	Physician engagement survey data has been <b>analyzed</b> and improvement actions have been <b>implemented</b> with positive results.
Physician recruitment and contracting process <b>do not</b> include assessment or formalized agreement on cultural/mission fit.	Recruitment and contracting process for all physicians includes a cultural fit <b>assessment</b> and <b>some degree</b> of formal code of conduct linked to behavior and mission.	Recruiting and contracting include an <b>assessment</b> of cultural fit as well as a formalized " <b>compact</b> " or code of conduct with mutually agreed on behaviors, values and mission for all physicians.

<i>Percentage of physician and other clinical provider contracts with performance and efficiency incentives aligned with ACO-type incentives</i>		
<b>No</b> initiation of new payment models based on performance or value.	<b>Moderate</b> degree of payment models or moderate risk models (bundled payments, shared savings and capitation payments).	<b>Significant</b> level of reimbursement risk associated with new payment models (bundled payments, two-sided shared savings with both upside and downside risk, or capitation payments).
<b>No</b> participation in or exploration in adopting an ACO or patient-centered medical home model (PCMH).	Participating in a <b>pilot</b> ACO or PCMH program.	<b>Participating</b> in an ACO or PCMH model across a significant population, utilizing value-based incentives.
<b>No</b> payment contracts, payment models or compensation linked to performance measures.	<b>Some</b> contracts, payment models and compensation tied to performance rewards related to quality, efficiency and patient experience.	<b>All</b> payment contracts, payment and compensation models are linked to performance results.
<i>Availability of non-acute services</i>		
<b>No</b> partnership, ownership or affiliation to offer non-acute care services.	<b>Some</b> ownership, partnership or affiliation to offer selected aspects of non-acute care.	<b>Full spectrum</b> of ownership, partnership or affiliation of health care services available to patients.
<i>Distribution of shared savings/performance bonuses/gains to aligned physicians and clinicians</i>		
Clinicians' performance measures are <b>not tracked</b> or <b>reported</b> .	<b>Some</b> clinicians' performances are measured and they receive benchmark data on performance against peers.	<b>All</b> clinicians' performances are measured and they receive benchmark data on performance against peers.
<b>Limited</b> portion of clinicians receive a distribution of shared savings or incentive rewards linked to performance.	<b>Selected</b> clinicians receive a distribution of shared savings or incentive rewards linked to performance	<b>Most</b> clinicians share financial risk and rewards linked to performance, and many have received distributions of shared savings or performance bonuses.
<i>Number of covered lives accountable for population health (e.g., ACO/patient-centered medical homes)</i>		
<b>No</b> patients participate in population health management or ACO initiatives.	<b>Pilot</b> programs on a population health management are available to patients.	<b>Active</b> participation in a population health management initiative (e.g., chronic disease management, prevention) for a defined population.
<b>No</b> ability to determine the attributable population for health management initiatives.	<b>Limited</b> ability to determine the attributable population for health management initiatives.	<b>Able</b> to measure the attributable population for health management initiatives and a sizable population is enrolled.
<i>Percentage of clinicians in leadership</i>		
<b>Limited</b> clinical representation at the leadership or governance level (10 percent or less).	<b>Stronger</b> clinical representation at the leadership or governance level (10 to 30 percent).	<b>Active</b> clinical representation at the leadership or governance level (30 percent or above).
Physicians and nurse executives have <b>limited</b> roles in development of strategic transformation initiatives.	Physicians and nurse executives are involved to a <b>moderate</b> degree in leading development of strategic transformation initiatives.	Physicians and nurse executives are <b>leading</b> development of strategic transformation initiatives.

Source: AHA, 2013.

## Strategy Two: Utilizing Evidence-Based Practices to Improve Quality and Patient Safety

Measurement of quality and safety improvement initiatives is critical for hospitals and health care systems moving to the second curve. New value-based models tie quality metrics to payment, encouraging hospitals and health care systems to use evidence-based practices and increase the organization's accountability for high-quality outcomes. Although many systems conduct measurement and data collection on utilization variation and quality issues, they need to intensify data analysis to identify performance improvement opportunities across the care continuum, develop standardized care processes, implement evidence-based protocols and train staff on clinical quality-improvement methods.

Collecting data on care transitions, readmissions, preventable admissions, mortality and other quality metrics allows health care organizations to identify variations in care, providing opportunities for clinical quality or process improvement. Evidence-based practices guide quality-improvement interventions and hospitals can utilize a variety of different performance improvement methods, such as Lean, Six Sigma, and Baldrige. Data from multiple sources, including patients and families, are necessary to identify and evaluate improvement interventions. Patient and family engagement in decision making is critical to generate positive health outcomes and increased satisfaction. Table 4 addresses specific metrics to evaluate readiness and achieve success on the second high-priority strategy.

Table 4: Evaluation Metrics for Strategy Two (applicable to the hospital or the health care system)

First Curve 1.0 → Transitioning in the Gap → Second Curve 2.0		
<i>Effective measurement and management of care transitions</i>		
<b>Limited</b> patient education and coordination after discharge.	<b>Moderate</b> degree of patient outreach and follow-up after care transition; some care coordination tools used to manage care transitions	<b>Fully</b> implemented clinical integration strategy across the entire continuum of care to ensure seamless transitions and clear handoffs.
<b>No</b> use of team-based approaches or case managers for chronic disease management or follow-up for at-risk patients after discharge.	<b>Limited</b> use of multidisciplinary teams, case managers or nurse care coordinators for chronic disease cases and follow-up care.	<b>Fully</b> implemented use of multidisciplinary teams, case managers, health coaches and nurse care coordinators for chronic disease cases and follow-up care after transitions.
<b>Limited</b> measurement of care transition data.	<b>Some</b> measurement of care transition data; no analysis conducted on the results.	Measurement of <b>all</b> care transition data elements. Data is used to implement and evaluate interventions that improve transitions.
<i>Management of utilization variation</i>		
<b>No</b> measurement of utilization variation; no processes to minimize variation.	<b>Relatively</b> consistent measurement and analysis; limited action to address variation.	<b>Regular</b> measurement and analysis of utilization variances occur, steps are employed to address variation and intervention effectiveness is analyzed on a regular basis.
<b>Limited</b> reporting on utilization variation with limited transparency or physician specificity.	Utilization variation reports created with <b>moderate</b> transparency or physician specificity.	Provides <b>completely</b> transparent, physician-specific reports on utilization variation.
<b>No</b> evidence-based practices or protocols to standardize care practices.	<b>Some</b> use of data-driven analysis to reduce variation in clinical practice and identify opportunities for standardization.	<b>Regular</b> use of evidence-based care pathways and/or standardized clinical protocols on a systemwide basis for at least 60 percent of patients.

<i>Reducing preventable admissions, readmissions, ED visits, complications and mortality</i>		
<b>No</b> comprehensive tracking of patient safety or quality metrics.	<b>Limited</b> tracking of patient safety or quality measures; some analysis of results.	<b>Regular</b> tracking and reporting on all relevant patient safety and quality measures.
<b>No</b> review process on quality performance for any care settings.	<b>Simple</b> review process on quality performance in certain care settings.	Data <b>commonly</b> used to improve patient safety and quality, with positive results observed.
<i>Active patient engagement in design and improvement</i>		
Provides <b>various sources</b> of patient education and information, but lacking a comprehensive patient engagement strategy.	Uses various patient surveys; <b>no in-depth analysis</b> or connection to engagement strategies is made.	<b>Regular</b> use of patient-engagement strategies such as shared decision-making aids, shift-change reports at the bedside, patient and family advisory councils and health and wellness programs.
<b>No</b> regular measurement or reporting on patient and family engagement.	<b>Some</b> regular measurement or reporting on patient and family engagement, with limited results.	<b>Regular</b> measurement or reporting on patient and family engagement, with positive results.

Source: AHA, 2013.

## Strategy Three: Improving Efficiency through Productivity and Financial Management

In the transforming health care environment, health care systems face an ever-increasing demand for efficiency in productivity, care delivery and financial management. As commercial payers reduce volume-based reimbursement levels, health care systems have a reduced ability to offset government payments and uncompensated care. As a result, health care organizations need to enhance their financial management capabilities to understand the true cost of care (per episode as well as on a per member, per month basis), focus on targeted cost-reduction goals, begin managing to Medicare payment levels throughout the entire organization, as well as demonstrate value and performance results.

As payment models shift to the value-based second curve, health care systems must manage in the curve gap to remain financially healthy. It is increasingly important for health care leaders to implement strategic cost-management approaches and focus on financial planning efforts while the payment system moves from volume- to value-based contracts. Leaders need to evaluate the implications of new payment models, tracking shared savings and financial gains from these performance-based contracts. These contracts can range from simple shared-savings models with upside risk to the health system, to two-sided shared savings (both upside and downside risk), partial or global capitation and bundled payments.<sup>4</sup> These value-based arrangements call for cost reduction while improving care quality and patient-engagement outcomes.<sup>5</sup>

As payers seek ways to bend the cost curve and increasingly use Medicare payment levels as a benchmark, hospitals are pressured to improve efficiency and cost effectiveness. According to “Managing to the Medicare Margin,” produced by Sg2 consulting group (<http://www.youtube.com/watch?v=uZdNeaBDwLA>), hospitals and health care systems will have to reduce costs by 13.9 percent if Medicare covered every patient. In order to prepare for these cost-reduction strategies hospitals need to prepare for Medicare-based payment levels. Reviewing internal and external benchmarks against operating budgets can assist in identifying specific cost-reduction goals. Financial management also must involve increased productivity through continuous process improvement, clinical care standardization and the elimination of variation in patient procedures.<sup>6</sup> Table 5 charts the evaluation metrics associated with strategy three.

Table 5: Evaluation Metrics for Strategy Three (applicable to the hospital or the health care system)

First Curve 1.0 → Transitioning in the Gap → Second Curve 2.0		
<b>Expense-per-episode of care</b>		
<b>No</b> tracking of expense-per-episode of care in any setting.	Tracks expense-per-episode data in <b>selected</b> care settings or certain episodes.	Tracks expense-per-episode data <b>across every care setting</b> and a broad range of episodes to understand the true cost of care for each episode of care.
<b>Shared savings, financial gains or risk-bearing arrangements from performance-based contracts</b>		
<b>Lacks</b> data or financial risk modeling tools resulting in limited ability to manage or measure risk.	<b>Moderate</b> ability to manage and measure risk (limited data collection, limited data analytics or limited ability to accept risk payment arrangements).	Measures, manages, models and predicts risk using a <b>broad set</b> of historical data across multiple data sources (e.g., clinical and cost metrics, acute and non-acute settings).
<b>No</b> financial risk (either as a payer or in partnership with a payer).	<b>Evaluating</b> a financial risk-bearing arrangement for a specific population (either as a payer or in partnership with a payer).	<b>Implementing</b> a financial risk-bearing arrangement for a specific population (either as a payer or in partnership with a payer).

<i>Targeted cost-reduction and risk management goals</i>		
<b>No</b> targeted cost-reduction or risk-management goals for the organization.	<b>Created</b> targeted cost-reduction or risk-management goals for specific services or departments.	<b>Implemented</b> targeted cost-reduction or risk-management goals for the organization.
<b>No</b> process or continuous quality-improvement interventions incorporated (Lean, Six Sigma, etc.).	<b>Initiated</b> process or quality-improvement interventions and captured initial data on the interventions.	<b>Instituted</b> process re-engineering and/or continuous quality-improvement initiatives broadly across the organization and <b>demonstrated</b> measurable results.
<i>Management to Medicare payment levels</i>		
<b>No</b> projections on the financial impact of managing to future Medicare payment levels.	<b>Projected</b> financial impact of managing to future Medicare payment levels for a <b>limited</b> scope of care settings.	<b>Projected</b> financial impact of managing to future Medicare payment levels for the <b>entire</b> organization; cost cuts to successfully manage at that payment level for all patients.

Source: AHA, 2013.

## Strategy Four: Developing Integrated Information Systems

In order to achieve these must-do strategies, hospitals and health care systems need to develop integrated information systems that incorporate multiple, disparate data sources across the care continuum. An integrated IT system should include a comprehensive data warehouse with clinical, financial, demographic and patient satisfaction data. Integrated information systems enable connectivity across providers and a complete view of patients' health histories at the point of care, resulting in better clinical decision making.

The performance of second-curve hospitals and health systems is dependent on advanced analytics and timely business intelligence capabilities that provide real-time decision support. Analytical capabilities, such as data mining, are critical to provide data and trends for real-time decision support. These capabilities also can help decrease administrative overhead, reduce duplicative tests or treatments, decrease medication errors and improve coordination of care across settings.<sup>7</sup>

Health care organizations moving to the second curve must have the ability to analyze and leverage data to evaluate quality-improvement interventions, predict financial risk, make informed business decisions, manage population health and assess process improvement performance results. Data registries and health information exchanges allow providers to access historical and robust data across a larger population base. Table 6 provides the evaluation metrics to assess progress toward meeting strategy four.

Table 6: Evaluation Metrics for Strategy Four (applicable to the hospital or the health care system)

First Curve 1.0  Transitioning in the Gap  Second Curve 2.0		
<i>Integrated data warehouse</i>		
<b>No</b> data integration across continuum of care.	Possesses a data warehouse with a <b>limited</b> amount of data sources (e.g., acute care and some non-acute care data).	<b>Fully</b> integrated and interoperable data warehouse, incorporating multiple data types for all care settings (clinical, financial, demographic, patient experience, participating and non-participating providers).
<i>Lag time between analysis and availability of results</i>		
Data analysis and reporting <b>not</b> widely available or easily accessible.	<b>Limited</b> amount of standard reports on key performance measures available.	Real-time availability to <b>all</b> data and reports through an easy-to-use interface, based on user needs.
<b>No</b> data-mining capabilities.	<b>Limited</b> data-mining capabilities on a subset of data or for certain delivery settings.	<b>Advanced</b> data-mining capabilities with the ability to provide real-time insights to support clinical and business decisions across the population.
<b>No</b> predictive modeling capabilities.	<b>Limited</b> predictive modeling capabilities on a subset of data or for certain delivery settings.	<b>Advanced</b> capabilities for prospective and predictive modeling to support clinical and business decisions across the population.
<b>No</b> ability to measure or demonstrate value and results.	<b>Limited</b> ability to measure and demonstrate value and results.	<b>Ability</b> to measure and demonstrate value and results based on comprehensive data across the care continuum (both acute and non-acute care).

<i>Understanding of population disease patterns</i>		
<b>No</b> examination of population disease patterns.	<b>Limited</b> examination of population disease patterns (e.g., focus on certain diseases or targeted population groups).	<b>Robust</b> data warehouse, including disease registries and population disease patterns to identify high-risk patients and determine intervention opportunities.
<b>No</b> ability to identify high-risk/high-utilization patients.	<b>Limited</b> ability to identify high-risk/high-utilization patients and conduct interventions.	<b>Thorough</b> population data warehouse that measures the impact of population health interventions.
<i>Use of electronic health information across the continuum of care and community</i>		
<b>Limited</b> electronic health information, <b>limited</b> interoperability between systems.	<b>Most</b> health information is available electronically, 80 percent of patient information is in a certified EHR, some interoperability exists between systems and limited population health data is included.	<b>Fully</b> integrated data warehouse with advanced data mining capabilities that provides real-time information in order to identify effective health interventions and the impact on the population.
<i>Real-time information exchange</i>		
<b>No</b> participation in a regional or other type of health exchange.	<b>Partial</b> participation in a regional or other type of health exchange.	<b>Full</b> participation in a health information exchange and utilizing the data for quality improvement, population health interventions and results measurement.

Source: AHA, 2013.

## Measuring the Six Other Must-Do Strategies

Future guides will focus on the additional six strategies and provide specific metrics. As a starting point, Table 7 outlines the additional strategies. Commonalities exist across these six strategies and the four high-priority strategies, so metrics associated with one strategy may be relevant for evaluating other strategies.

*Table 7: Potential Metrics for Strategies Five through Ten*

<b>Strategy Five: Joining and Growing Integrated Provider Networks and Care Systems</b>
Care arrangements and redesigned workforces that increase integration
Primary-care service arrangements that increase coordination across the continuum of care
Post-acute care services and integration with acute-care providers
Working with partners and other organizations on integrated care delivery
Structural ownership, partnership or affiliation arrangements that enable integrated care delivery
Alignment of clinical staff and other workforce to the organization's mission, vision, values and strategic priorities
<b>Strategy Six: Educating and Engaging Employees and Physicians to Create Leaders</b>
Formal leadership education program for employees, physicians and other clinicians
Formal leadership development and mentoring opportunities within the organization
Engagement of the employee population on culture and key strategic improvement initiatives
<b>Strategy Seven: Strengthening Finances to Facilitate Reinvestment and Innovation</b>
Identification and access to necessary capital finances for innovation initiatives
Quality-improvement initiatives tied to financial goals
<b>Strategy Eight: Partnering with Payers</b>
Contracts with payers aligning risk and reward
Contracts and partnerships with different payers on new initiatives to transform delivery or financing of care (commercial, regional, government, self-insured employers, etc.)
Contracts including clinical quality, patient experience/satisfaction, cost/efficiency and second-generation value indicators
<b>Strategy Nine: Advancing an Organization through Scenario-Based Strategic, Financial and Operational Planning</b>
Incorporation of flexible, systematic strategic planning with financial and operational capabilities
Incorporation of scenario-based planning including risk assumptions
<b>Strategy Ten: Seeking Population Health Improvement through Pursuit of the "Triple Aim"</b>
Implementation of the Institute for Healthcare Improvement's Triple Aim initiative
Development of population health programs
Tracking and measurement of population health management initiatives relative to evidence-based practices

Source: AHA, 2013.

## Conclusion

For hospitals and health care systems to meet the second-curve challenges, leaders must create and measure organized processes. The second curve will require value, integration, the ability to meet patient expectations and clinician engagement on all levels. Although the four high-priority strategies outline different aspects of the care delivery system, all of the strategies address the shift toward value-based care delivery, with special consideration for managing in the gap. Using these metrics, leaders can evaluate progress in meeting the challenges of a dynamic, evolving health care environment. This guide will help leaders manage in the gap while payment models continue to evolve to a value-based system.

## Endnotes

- 1 Healthcare Financial Management Association. (2012, October). *HFMA's value project: the value journey, organizational road maps for value-drive health care*. Westchester, IL: Healthcare Financial Management Association.
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- 5 Healthcare Financial Management Association. (2012, June). *HFMA's value project 2: defining and delivering value*. Westchester, IL: Healthcare Financial Management Association.
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