

# The Balanced Scorecard in Healthcare Organizations: A Performance Measurement and Strategic Planning Methodology

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**T**he balanced scorecard (BSC) is essentially a customized performance measurement system that goes beyond conventional accounting and is based on organizational strategy. It is a holistic methodology that converts an organization's vision and strategy into a comprehensive set of linked performance and action measures that provide the basis for successful strategic measurement and management. It is considered balanced because the performance measures are grouped into various perspectives (typically four) that are critical for organizational success. The system strikes a balance between financial/operating and other measures and provides a set of forward-looking performance indicators linking strategy to specific actions. These measures and indicators, when correctly developed, provide a comprehensive view of organizational performance.

## INTRODUCTION TO THE BSC

Initially developed in the business sector, the BSC's performance measurement and strategic planning methodology is directly applicable to the health services sector and healthcare organizations. In this article we present (1) an introduction to the BSC, including its evolution and the traditional four balanced perspectives pyramid; (2) flexibility of BSC perspectives; (3) effective performance measurement; (4) the scorecard from a strategic per-

spective; and (5) the BSC in the healthcare industry, with reported applications in the literature.

The BSC is both a performance framework and a management methodology. It was developed by Robert Kaplan and David Norton after an extensive research project in 1990. The multiclient study, "Measuring Performance in the Organization of the Future," was sponsored by the Nolan Norton Institute, the research arm of the accounting/consulting firm KPMG. It was a year-long research project with 12 companies at the leading edge of performance measurement (Kaplan and Norton 1992). The researchers believed that traditional performance measurement systems focusing primarily on financial measurements actually hindered organizational growth and success. The conclusions were that, contrary to popular practice, organizations should not be managed based on "bottom line" results.

Successful organizations depend on a variety of lead indicators of organizational health. Those indicators are prospective and allow organizations to plan for the future and adjust to any problems. Financial measures are lag indicators (retrospective); they report past performance and are not good for predicting the future. Financial measures of performance alone rarely provide managers with all the information they need to make sound strategic decisions. Reliance on financial indicators alone

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often leads to a narrow, short-term focus and can serve as a roadblock to adopting long-term opportunities or dealing with future threats.

### Evolution

With its focus on improving performance measurement systems, the BSC represents a shift in business paradigms. It provides clarification of vision and goals, management consensus on vision and strategy, and focus on improved performance. Kaplan and Norton (1996d) argue that the competitive environment has changed from competition based on ability to invest in and manage physical (tangible) assets to competition based on knowledge and the ability to exploit intangible assets (i.e., human capital and information systems).

Many companies, as well as entire industries, are facing global competition, increasingly knowledgeable and demanding customers, and activist shareholders. More companies across a variety of industries have become dissatisfied with the lack of responsiveness and information from their traditional performance measures. They are seeking management models that recognize the importance of nonfinancial performance in driving financial performance. Although many companies use the BSC for measuring and motivating business unit performance (in the case of healthcare, strategic service units), some have started using it more strategically.

According to Kaplan and Norton (1996a, 1), "many managers have begun to integrate the scorecard into their planning and budgeting processes. Used this way, the scorecard helps managers align their business units, as well as their financial and physical resources, to the company's strategy." They believe this integration focuses capital investments, various strategic initiatives, and annual discretionary expenses on achieving the targets for the strategic objectives and measures reflected on the business unit's scorecard. As the cornerstone of a new integrated management system for the information age, the BSC is a system that can align all operational activities with overall organization strategy.

Over the past decade, the nature of the BSC has evolved. As companies have used the methodology and achieved tangible results, the role of the BSC has grown to become the foundation of an integrated and iterative strategic management system. The BSC has become a framework for implementing and managing strategy at all levels of an organi-

zation by linking objectives, initiatives, and measures to overall strategy. As such, the BSC provides an enterprise view of an organization's performance by integrating financial measures with other key performance indicators around customer perspectives, internal business processes, and organizational growth, learning, and innovation.

The BSC adopts the principles of continuous quality improvement (CQI) and is similar in many ways to strategic quality planning or hoshin planning. Hoshin planning, as applied to healthcare, for example, flows from the organization's strategic vision and involves allocating resources and aligning or restructuring the organization (Rakich 2000). Since the concept was introduced in 1992, BSCs have been implemented at corporate, strategic business unit, departmental, shared-service, and individual levels at hundreds of organizations worldwide, in business and healthcare sectors both private and public.

### A General Description

The BSC strategic approach espouses the use of information systems to track a limited number of balanced metrics (measures and indicators) that are closely aligned with strategic objectives. Organizational performance and strategy are multidimensional. Organizational excellence stems from achieving balance among various functions, not from maximizing one or two of them to the detriment of others. The scorecard typically measures organizational performance across the following four balanced and linked perspectives:

- *Financial perspective.* How do we look to our shareholders? In the case of not-for-profit healthcare organizations, the questions may include the following: How do we look to our stakeholders (e.g., patients, payers, clinicians, communities)? What financial/performance condition must we maintain or achieve to accomplish our mission? Typical scorecards combine traditional return on investment (ROI) and net income measures with more unique measures found in healthcare organizations, such as gross revenue/cost per adjusted discharge, contract allowances and discounts as a percentage of operating patient revenues, and inpatient/outpatient revenue mix. Other measures that have financial implications are patient-payer mix, Medicare/Medicaid mix, average length of stay, and occupancy rate.

- *Customer perspective.* How well do we satisfy our customers' needs? Typical measures may

include results of customer profitability analyses or customer satisfaction surveys. In healthcare organizations, this perspective should consider the relationships with and needs of a variety of stakeholder groups, including patients, payers (such as Medicare/Medicaid and managed care organizations), and medical staff. Objectives and measures must consider internal as well as external customers.

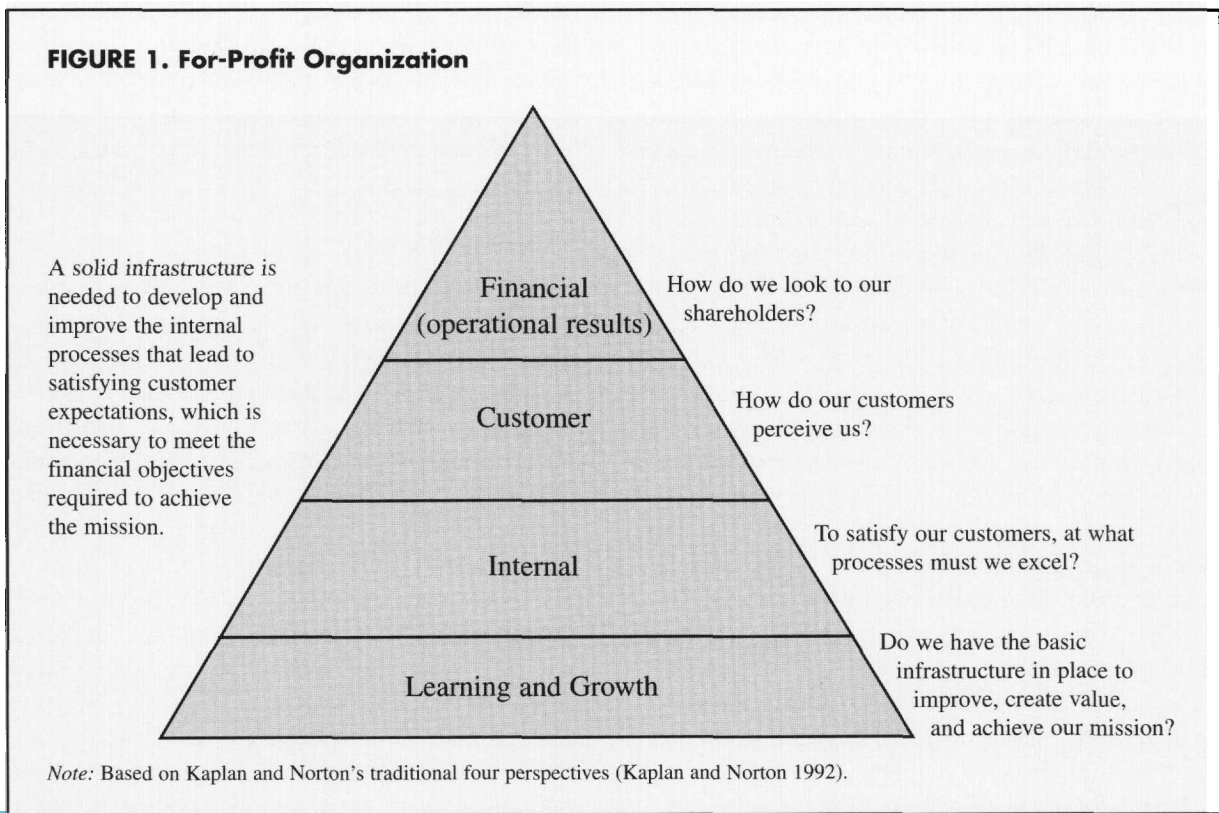
- *Internal perspective.* How well do we perform at key internal operational processes? Effective internal business processes are critical to providing products and services to satisfy our customers' needs in a fiscally responsible manner. Examples in business may include cycle time, safety ratings, rework, and on-time deliveries. Examples in healthcare may include surgical capacity utilization, length of stay, timeliness and accuracy of ancillary services, or FTEs per average daily census.

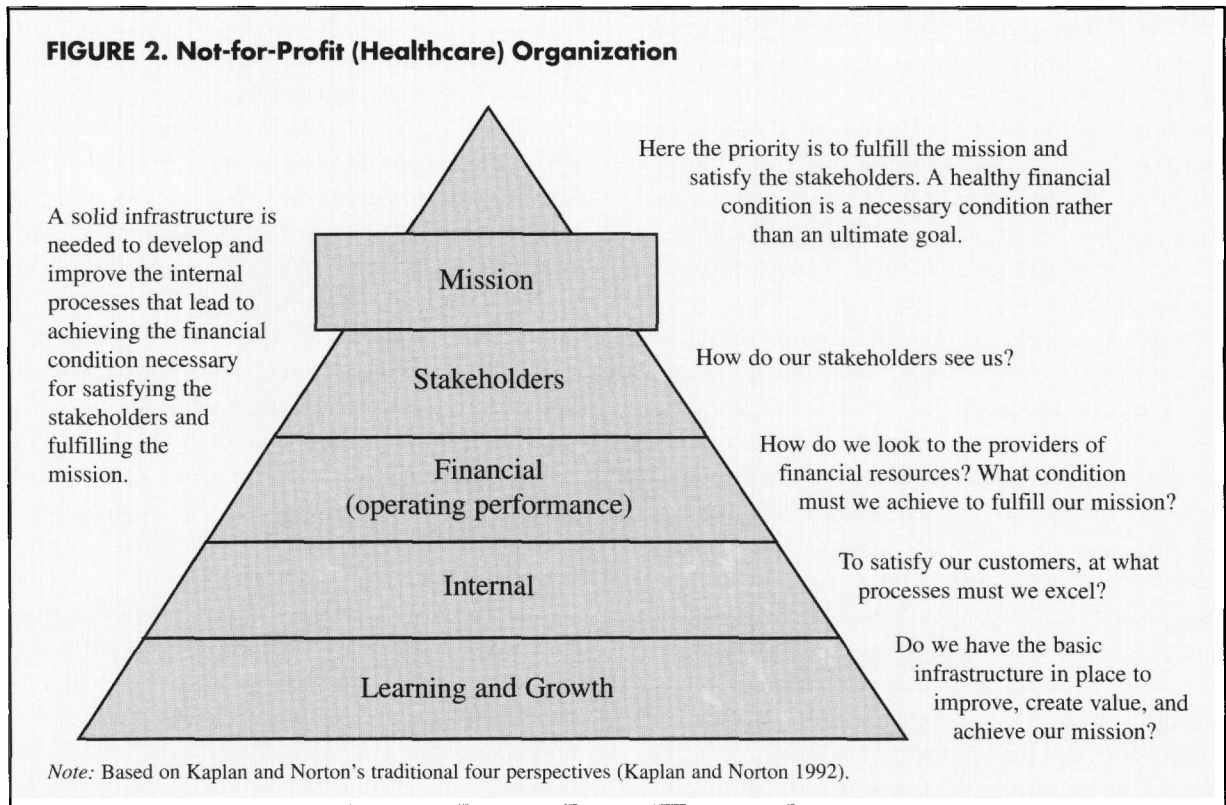
- *Learning and growth perspective.* Are we able to sustain innovation, change, and continual improvement? These measures relate to an organization's more intangible assets and the ability to excel in the future. They normally reflect employee satisfaction, motivation, and empowerment, as well as the capabilities of employees and information systems. Measures may include frequency of

training, employee development, advancement opportunities, turnover rate, and the development of new services and products.

The BSC is not meant to substitute for an organization's day-to-day measurement system (Kaplan and Norton 1996c). Scorecard measures should direct the attention of managers and employees to the specific factors that are expected to lead to competitive breakthroughs for the organization. The BSC enables organizations to track short-term financial and operating results while monitoring progress in building the capabilities and acquiring the intangible assets needed for future growth and success (Kaplan and Norton 1996b). Because measures in the various perspectives are based on organizational strategy, scorecards should include unique measures along with those measures that are common to many organizations (mostly lag indicators).

We have arranged the four balanced perspectives mentioned above in the form of a pyramid, or a hierarchy, that is consistent among most organizations. Figure 1 represents a for-profit pyramid and figure 2 may be more typical of not-for-profit organizations such as healthcare. The learning and growth perspective constitutes the base. It directs





attention to the foundation of all future success—the organization's people, information systems, and infrastructure. Long-term success can only be possible if there is an adequate investment in the base.

The next level is the internal business perspective. The development of a true learning organization supports success in this perspective, as well as in the learning and growth perspective. The internal perspective must focus on the internal processes that drive current operations of the organization. Improvement in critical internal processes is a reliable indicator of future financial and operational success. To translate these improved internal processes into financial/operational success, however, organizations must first satisfy—even delight—their customers.

The customer perspective is the third level of the for-profit pyramid. Anticipating and satisfying customer needs are critical to organizational success. The customer (or stakeholder) perspective is often placed at the highest level of a not-for-profit pyramid, as profits are not the overriding goal. In profit-oriented organizations, the financial perspective measures the ultimate results that the business provides to its shareholders. Even in not-for-profit organizations, a healthy financial condition is a prerequisite for long-term viability.

Maintaining a healthy financial position allows a

not-for-profit entity to obtain the resources necessary to provide its services, satisfy its stakeholders, and fulfill its mission. Ultimately everything that happens in an organization affects financial performance, so it is important to identify and measure those things that drive financial performance. The financial perspective is not dominant in all organizations, and some balanced scorecards (particularly in not-for-profit entities) do not include it in determining success.

**FLEXIBILITY**

Organizations adopt the perspectives that are relevant to how they measure success. In healthcare, scorecards appear even more diverse than in the business and academic sectors. Duke University Medical Center's scorecard uses an education and research perspective in place of the learning and growth perspective (Meliones 1998). The "Report Card for Outcomes Management" at the Butterworth Health System in Grand Rapids, Michigan, has the following four perspectives: patient satisfaction, clinical outcomes, functional health status, and cost (Schriefer, Urden, and Rogers 1997). The Henry Ford Health System's BSC perspectives consist of growth; customer satisfaction; system integration, which refers to their entire healthcare system; and low-cost provider

(Strenger 1997). Johns Hopkins's new scorecard is geared to clinical outcomes, financial goals, patient satisfaction, and research and teaching outcomes (HPRA 2000a).

Other healthcare organizations, such as the Hudson River Psychiatric Center in Poughkeepsie, New York, retain the four traditional perspectives from the Kaplan and Norton model (HPRA 2000b). At the University of Southern California, the Rossier School of Education uses an academic scorecard to supply "metrics of excellence" to the provost's office (O'Neil et al. 1999). The scorecard has an internal business perspective and a learning and growth perspective, but the financial perspective was replaced by an academic management perspective and the customer perspective was replaced by the stakeholder perspective. That framework would be beneficial for academic health centers embarking on the BSC methodology.

Those diverse perspectives highlight the ways that the BSC can be adapted to meet the unique needs of various organizations. The hierarchy of the perspectives on the BSC, as well as the perspectives themselves, may vary among different types of organizations and the environments in which they exist. Many not-for-profit organizations have altered the BSC hierarchy (see figure 2) by placing their mission statements at the very top with customers directly below it (Kaplan and Norton 2000). Changing the scorecard does not change the nature of the model itself; it reflects strategy. Customizing the scorecard often sets the stage for strategic conversation to begin and results in initial "buy-in" to the entire initiative (Chesley and Wenger 1999). Management commitment to the strategy and the BSC methodology is essential for achieving long-term benefits.

### EFFECTIVE PERFORMANCE MEASUREMENT

It has often been stated that what gets measured gets delivered. This poses a significant danger for organizations whose performance measurement systems focus on the wrong measures. Narrow, irrelevant, or misleading performance measures can actually undermine an organization's strategic mission by encouraging nearsighted management practices and diverting scarce resources unproductively. The objective is not to maximize the measures; it is to gauge progress in achieving organizational goals.

If an organization focuses on measures such as ROI, occupancy rate, or revenue/discharge, managers will focus on maximizing these measures.

That may not be healthy for the organization or help move it toward its vision. A focus on an inappropriate set of performance measures can undermine organizational learning, employee motivation and satisfaction, creativity and innovation, and quality. Ultimately, at all levels in the organization, we do get what we measure.

The consulting firm A.T. Kearney has done significant research and development in performance measurement. Based on the firm's work and research with leading corporations worldwide and a recent in-depth study of performance measurement practices in 113 companies (conducted for A. T. Kearney by the Conference Board, 1999), it was found that the leaders of performance measurement share four characteristics:

1. They apply a rigorous analytical approach to understanding the nature and logic of their business model, which enables them to identify and select the right measures.
2. They use the performance measurement system as the cornerstone of their strategic management and reporting processes, modifying their measures as strategies are implemented or as measures become less useful.
3. They design individual performance and compensation programs for their executives and managers consistent with the business scorecards.
4. They support the performance measurement system with information technology that enables automatic data capture, drill-down presentation, and root-cause analysis.

These four characteristics appear to be consistent with those of companies successfully using the BSC as a strategic management system. Performance measurement systems do not always equate to strategic management systems, which use the feedback from performance measurement to continually test the relevance and logic of the strategy and to modify underlying assumptions, objectives, and strategy accordingly. The key to establishing effective performance management systems is translating organizational strategy into the right, integrated set of measures. This allows the system to provide control by monitoring short-term results and to provide guidance by reporting on the drivers of future performance.

### A STRATEGIC PERSPECTIVE

Effective scorecards are not just collections of generic measures grouped into four categories. An

effective scorecard is customized to the organization; it should describe the strategy in operational terms. The test of whether a BSC truly communicates both the outcomes and the performance drivers of a business unit's strategy is its sensitivity and transparency (Kaplan and Norton 1996c). In other words, if a competitor could look at your BSC and understand it well enough to block your strategy, it is sensitive and transparent and, thus, well designed.

Three criteria can be used to ascertain whether or not the performance measures in the scorecard truly reflect the strategy:

1. Cause-and-effect relationships. A strategy is a set of assumptions about cause and effect. If cause-and-effect relationships are not adequately built into the BSC, it will not translate and communicate the organization's vision and strategy. Every measure selected for a BSC should be part of a chain of cause-and-effect relationships that represent the organization's unique strategy. Cause-and-effect relationships among the perspectives should help managers identify performance drivers that will positively influence important outcome measures and test the viability of the strategy.

2. Performance drivers. Many measures are common to most companies within an industry; these are known as lag indicators or outcome measures. Many of these common measures, such as ROI, will be encompassed in the financial perspective. Market share and customer retention are also examples of common measures. The drivers of performance are lead indicators; they are forward-looking and, normally, nonfinancial measures. These tend to be unique because they reflect what is different about the organization's strategy. An effective scorecard needs a mix of lead and lag indicators. Outcome measures without performance drivers do not communicate how results are to be achieved. Performance drivers without outcome measures may help to achieve short-term operational improvements but will not reveal whether they have been translated into enhanced financial performance (or stakeholder satisfaction). It is important to understand the link between short-term results and long-term goals.

3. Links to financial measures. Strategic goals must translate into measures that are ultimately linked to financial and performance indicators. If goals and improved operational performance do not translate into enhanced organizational performance, it is likely that there is a fundamental flaw

in the strategy or its deployment. In not-for-profit organizations, strategic goals usually translate into measures that are ultimately linked to high-level customer or other stakeholder indicators (the highest pyramid level).

A serious deficiency in traditional management systems is their inability to link an organization's long-term strategy with short-term actions. The BSC can provide the link between strategic planning, operational planning, and human resource activities to ensure alignment across the organization. Although providing valuable information on current operations, the BSC can be used as a strategic management system to accomplish the following four management processes, which help to link long-term strategic objectives with short-term actions: translating the vision, communicating and linking, business planning, and feedback and learning (Kaplan and Norton 1996d, 2-8).

- *Translating the vision.* This process involves developing an integrated set of objectives and measures based on vision and strategy; it is usually done by a team of senior executives. Mission statements are often vague; they tend to be interpreted differently by different people. The process of actually formulating the measures often reveals discrepancies in assumptions about the vision, mission, and strategies. The process of translating vision and strategy into operational measures serves to build consensus among managers. Their participation and dialogue also foster commitment.

Once consensus has been reached, the resulting objectives and measures are used to communicate the strategy to people throughout the organization. Measurement is a powerful way to help organizations implement strategy. It communicates the strategy in a common language and stresses what is important. Departments and individuals can look at the metrics and identify specific actions they can take to influence the numbers that the organization is using to measure its strategy.

- *Communicating and linking.* This process involves communicating the strategy to all employees and helping them understand the critical objectives and how they will be measured. Using creative and interactive modes of communication is a good way to generate interest, enthusiasm, and support. This process also involves defining objectives and measures for operating units, functional departments, teams, and individuals that support the organization's strategies and objectives. Finally,

rewards and possibly compensation are linked to the established performance measures, further enhancing employee understanding, motivation, and commitment to organizational goals.

In large organizations, a high-level BSC is normally developed first. Subsequently, each strategic business unit develops a BSC with objectives and unique measures that reflect its specific strategies, as well as those of the organization. Typically, senior managers review and approve the units' BSCs and use them for decision making and performance evaluation. Many levels of scorecards may exist within a single organization, even a small one. Not all scorecards start at the top of the organization; many are being used successfully within single departments. The BSC often starts as a pilot program within a single business unit or department and serves as a model for others and a learning experience for the organization.

- *Business planning.* This process helps organizations integrate business and financial plans by using BSC objectives as the basis for setting targets, ordering priorities, and allocating scarce resources. This ensures that various programs and change initiatives actually support organizational strategy and that new programs and initiatives will receive adequate resources.

- *Feedback and learning.* This process allows organizations to test the viability of their overall strategy. The results from all four perspectives are reviewed frequently and compared to the assumptions upon which the strategy was based. If the original hypotheses were correct, results will be moving toward the BSC targets as predicted. If they are not, then the strategy (cause-and-effect relationships contained in the BSC) should be reevaluated in light of current conditions and organizational capabilities, and the objectives and measures should be reviewed and possibly revised. This process constitutes strategic (double-loop) learning, a key feature of the BSC management system.

Although the first three of the "new management processes" play an important role in strategy implementation, they do not ensure that organizations excel in a very competitive environment. For many organizations today, success depends on flexibility and rapid adaptation to changing technologies and aspects of the external environment such as government policy toward healthcare. Organizations need the capacity for strategic learning that comes from the fourth management process, feedback and learning. Efforts should be made at the

executive level to extend this learning to people throughout the organization. This transforms healthcare organizations into learning organizations that can compete successfully in the rapidly changing healthcare industry.

Peter Senge defines learning organizations as "organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (1994, 3). Organizational learning is commonly recognized as a source of sustainable advantage. The BSC facilitates organizational learning by helping to build a shared vision, encouraging dialogue among different members of the organization, and providing the feedback needed for double-loop learning.

In essence, the BSC describes the organization's strategy. The four management processes enable effective implementation of the strategy and provide for strategic learning. Strategic learning allows organizations to manage their strategies in a continual process. With it, organizations can anticipate and shape their futures. Such organizations are called strategy-focused (Kaplan and Norton 2000).

### The BSC and Strategy-Focused Organizations

Kaplan and Norton have spent ten years studying more than two hundred companies that have implemented the BSC methodology. Their research on successful BSC companies has uncovered a consistent pattern of achieving high levels of strategic focus and alignment. They have observed five common principles at work in these organizations, which are described in detail in their latest book, *The Strategy-Focused Organization* (2000). The principles consist of the following:

1. Translate the strategy to operational terms. This is accomplished through building balanced scorecards and strategy maps. The map is a general graphic framework for describing strategy that illustrates the cause-and-effect relationships among the BSC components. The cause-and-effect chain clearly shows how the desired outcomes will be achieved.

2. Align the organization to the strategy. Synergy is created when individual strategies are linked and integrated. All parts of the organization become linked to organizational strategy through common themes and objectives included in their

scorecards. The role of the organization is to define the linkages and to ensure that they are in place.

3. Make strategy everybody's everyday job. Balanced scorecards are used to help communicate and educate the organization about the strategy. To be successful, organizations must ensure that everyone understands the strategy and that their daily decisions and activities contribute to the success of the strategy. That occurs as business units, departments, teams, and individuals develop their own scorecards, which are linked to the high-level scorecard. Alignment and commitment intensify as people participate in setting their own objectives and targets and see how their contributions fit into the big picture. It was found that successful organizations linked incentive compensation to the BSC. This served to increase employee interest in all elements of the strategy and caused them to seek additional information about specific measures.

4. Make strategy a continual process. This is the double-loop learning that combines the management of tactics and the management of strategy into one process. It results from feedback and learning. It includes linking strategy to budgeting and resource allocation, reviewing performance measures and strategy in regular management meetings, and continually testing and adjusting the cause-and-effect relationships to verify or adjust the strategy.

5. Mobilize change through executive leadership. Senior management must be actively involved in and completely support the change initiative. They must create the enthusiasm and momentum, communicate the need for change, and lead the transition to the new system. By linking various management functions and policies (i.e., planning, budgets, compensation) to the BSC, organizations create a total strategic management system.

### **Organizations That Benefit Most from the BSC**

The BSC is most beneficial for organizations dealing with change, growth, and the long term, as it enables them to deal effectively with the time delay between decisions and actions and their consequences. It helps to justify investments in long-term items (i.e., training and development, new product development). For organizations that are pursuing strategies of retrenching, downsizing, or cost-reduction, key measurements will necessarily be financial and focus on the short term. Under

those circumstances, traditional management tools are appropriate (Marquardt 1997). The BSC holds great potential benefit for any industry that is facing rapid changes in technology, competition, economic environment, or regulation.

The balanced scorecard is a tool for strategy implementation. Many organizations develop excellent strategies but fail to implement them effectively. The BSC methodology can help those organizations. The process of developing a BSC may show that those in management disagree on the strategy or have disparate definitions of strategy components. The development process, by promoting dialogue and a critical evaluation of the strategy among senior management, may lead to modifying the existing strategy. In other cases, the BSC can serve as a framework for developing strategy. Designing a BSC forces management to look at the organization holistically, as part of a larger system, and to determine which factors are critical for success. It helps to clarify assumptions and build a shared vision.

### **THE BSC IN THE HEALTHCARE INDUSTRY**

Balanced scorecards are particularly appropriate for organizations in turbulent industries such as healthcare. Many institutions are evolving into integrated health delivery systems comprising hospitals, outpatient clinics and surgery centers, nursing homes, and home health services (Curtright, Stolp-Smith, and Edell 2000). The pressures of operating in a dynamic environment often lead to ignoring factors that are critically important to organizational success. It is becoming more important for leaders of integrated healthcare organizations to develop and implement management systems that can integrate diverse groups and focus them on organizational strategies. Competition among healthcare providers is growing, quality of care is facing increasing scrutiny, and economic issues have become decisive in the allocation of medical care. The BSC captures this dynamic complexity and facilitates the development of a systems-oriented approach to management.

A variety of stakeholder groups are putting increasing pressure on providers for measured performance; they are demanding data on quality and patient satisfaction, although simultaneously pressing for lower costs (Griffith and King 2000). Healthcare management teams routinely receive large volumes of data from a variety of sources but are often unable to distill the information they



need to make good strategic decisions. Information overload simply limits their capacity to manage effectively. The BSC methodology succinctly provides the feedback necessary to help organizations monitor performance and manage strategy.

Healthcare has been slower than most industries to adopt the BSC. A search of the literature reveals that the BSC is being used successfully by some of the major hospital and managed care organizations around the country and around the world. Although many healthcare professionals, organizations, and consultants are advocating the use of the BSC as a strategic management system, there are few detailed published accounts of the development and implementation processes or the benefits derived. A great deal of interest in the BSC now exists within the healthcare industry. As industry experience with the BSC grows and successes are shared, use of the BSC in healthcare is continuing to expand.

Applying the BSC to healthcare presents some unique challenges. That is due in part to the many different stakeholder groups that must be considered. At a minimum, key stakeholder groups may include patients and their families, employers, health plans, physicians, employees, administrators, shareholders, communities (and the public in general), and regulators. That is why the category "stakeholders" often is a higher-order BSC perspective than is "financial." It has been found that "the process of design and implementation in healthcare scorecards requires exquisite attention to communications with multiple stakeholders. It also requires ensuring their commitment and support from the beginning if the effort is to be successful" (HPRA 2000a, 3).

Many healthcare organizations are using "report cards" to measure and communicate performance. Although that is a positive trend, the report cards are often two-dimensional, using clinical outcome and cost measures. They do not provide the information to describe all of the critical success factors of the organization. They are not linked to organizational strategy.

Healthcare organizations need to understand how they add value and then develop balanced scorecards that include measures of business value, employee value, patient value, and learning and growth (Castaneda-Mendez, Mangan, and Lavery 1998). Many organizations do not get good results from BSC efforts, not because they lack valid measurements or a balanced perspective, but simply

because they do not develop cause-and-effect links among the measurements and the perspectives. Merely monitoring key performance indicators or stakeholder relationships may lead to short-term improvements in performance, but it does not help organizations to manage strategy.

In general, healthcare organizations are just beginning to develop balanced scorecards. One observer suggests that there is too much focus on "where the data are rather than where the data are needed" (Santiago 1999, 1574) and that efforts are on analyzing data rather than collecting more relevant data. One reason for that is the current low capability of many information systems.

A recent study by Chow et al. (1998) explored the applicability of the BSC approach in the healthcare sector. These researchers surveyed top-level administrators of five southern California hospitals to determine whether they were developing a system like the BSC. Four out of five of the administrators indicated that a BSC-type of system had been implemented, and they unanimously rated it as extremely beneficial. The respondents declined to reveal their specific strategies or goals, but they provided suggestions for general goals and measures.

The study also surveyed five laboratory administrators (at a different set of hospitals) to determine how the BSC could be applied to a hospital subunit. Although none of the respondents from this group reported a total implementation of a BSC-type system, they felt such a system would be very beneficial. Although this study was small and limited in geographic scope, Chow et al. believe that the BSC has potential value for healthcare organizations and that there are far more applications of the BSC in the healthcare sector than are being reported.

### Applications of the BSC in Healthcare

St. Mary's Duluth Clinic Health System (SMDC) uses the BSC to provide a framework for translating its mission and strategy into operation (Kazemek et al. 2000). The system's vision, goals, measures, and targets are summarized on a single page for the board's review. SMDC has pioneered the use of the balanced scorecard in its system governance and management. The BSC approach helps the board see the big picture without volumes of data and results in more strategic board discussions. For management purposes, SMDC uses more detailed summary and service line score-

cards. Separate report cards on specific clinical services are also generated by the BSC system.

Wachtel, Hartford, and Hughes (1999) used the Burn Center of the University of Colorado Health Sciences Center to test whether the BSC methodology was appropriate for the core business plan of a healthcare strategic business unit. The authors describe, in detail, the process used to develop the scorecard and then present the completed scorecard for the Burn Center. They concluded that the BSC methodology could be adapted to a burn center and could produce many benefits. The BSC, then, does not have to originate from the top level.

In the early 1990s, the trustees at Henry Ford Health System (HFHS) asked their executives to develop a BSC for the system (Strenger 1997). Strategic planning revolves around the BSC, and executive evaluations and bonuses are linked to it. The BSC also facilitates clinical integration efforts (Lumsdon 1994). Vinod Sahney, senior vice president of planning and strategic development at HFHS, helped develop the BSC. According to Sahney, the balanced scorecard can be developed for the system or for any operating entity. He describes the BSC as "a powerful technique to drive performance within an organization." In addition, he believes "it is an excellent framework in which to focus energies on strategic areas" and that it "ties together an organization's strategies, measurement of performance, goals to be accomplished, performance levels, and accountabilities. . . ." (1998, 7).

Montefiore Hospital is the university hospital for the Albert Einstein College of Medicine. Work on a BSC project began in October 1998. The BSC management system was subsequently used as a mechanism to communicate and implement new strategy (GRIP: *grow*—volume and market share; *rebalance*—academic and clinical staff; *infrastructure*—information systems and state-of-the-art technology; *performance*—setting targets and achieving them) within its newly decentralized units (Kaplan and Norton 2000). Montefiore's scorecard system has three levels: the acute care division (the highest level), all of the eight care centers, and the individual service centers (cost centers). Development began at the top level and spread downward. Prior to adopting the BSC, 90 percent of the hospital's measurements were financial. Early results from the BSC program were reported to be favorable.

One of the most impressive applications of the BSC in the healthcare sector is that of Duke Children's Hospital (DCH) in Durham, North Caroli-

na. DCH is a 134-bed academic pediatric hospital within the Duke University Health System. The chief medical director, Dr. Jon Meliones, led the BSC program in 1997 in response to serious organizational problems, including a \$7 million increase in annual losses in four years. The DCH vision, which subsequently became the new mission statement, was "to provide patients and families with high quality, compassionate care within an efficient organization" (Meliones 2000, 58). Meliones outlines the design and implementation of the first pilot BSC in the pediatric ICU, which he led. The pilot was so successful that within a year, the BSC was implemented in all areas of DCH.

Results attributed to the BSC at Duke Children's Hospital from 1996 to 2000 include reduction in average cost per case from nearly \$15,000 to \$10,500; a margin increase from an \$11 million annual loss to a \$4 million gain; an 18 percent increase in customer satisfaction ratings; a decrease in average length of stay from 7.9 days to 6.1; a decrease in readmission rate from 7 percent to 3 percent; a cost reduction of \$29 million without staff cutbacks; and a 45 percent increase in satisfaction with children's services and with the way the entire administration team performed its job.

Canada provides publicly funded health services, and the 1990s have been turbulent for its healthcare providers. Cutbacks in funding and other factors have forced hospitals to adopt a more businesslike approach to management (Chan and Lynn 1998). In 1997, Ontario Hospital Association (OHA) announced plans to create balanced scorecards for Ontario hospitals (CNW 1999). The publication "Hospital Report '99: A Balanced Scorecard for Ontario Acute Care Hospitals" is the largest and most comprehensive report published on Canadian hospital performance; it was released on December 16, 1999. The project was initiated and funded by the OHA and was prepared by a research team from the University of Toronto.

The four key perspectives of this BSC are financial performance, patient satisfaction, clinical utilization and outcomes (how hospitals deal with common conditions requiring their care), and system integration and change (hospitals' efforts to invest in the future by improving links with other providers of care, investing in better information for decision making, and improving coordination of care). The report includes both system-level results and hospital-specific information.

That effort seems to represent what Kaplan and

Norton (2000) refer to as a KPI (key performance indicator) scorecard. It considers various perspectives but is not specifically linked to a unique strategy and is often found in manufacturing and healthcare organizations that have been using CQI. This information is available from the OHA Web site.

## CONCLUSIONS

Adopting a BSC is not a decision to be taken lightly. It is a major undertaking for any organization, much like decisions to implement CQI and reengineering. It is costly, especially in terms of management time, it is complex, and it often meets with a great deal of initial resistance. In many instances, new information systems must be developed to capture relevant data. It requires the full support and commitment of the entire senior management team. That is often a challenge, especially when the process is long and results do not materialize quickly. Implementing a BSC requires a long-term commitment, critical thought and the challenging of existing assumptions, creativity, teamwork, and open communication. Moreover, traditional patterns of thinking must change; the BSC requires systems thinking. It is necessary to look at the big picture over the long term and to understand fully the interdependencies that exist. Senior management needs to understand that the development of an effective strategic management system is a continual, evolving process.

Organizations have encountered a wide variety of design and implementation problems with the BSC methodology. Some estimates suggest a 70 percent failure rate for scorecard implementations. In spite of the numerous challenges, many organizations have achieved high levels of success using the BSC, and the number using it is growing rapidly. As they continue, more information and valuable experiences are being shared. Managers who are considering adopting a BSC for their organizations should research the topic thoroughly and, above all, know what they hope to achieve before they start the project. To be successful, especially in healthcare, the BSC will require the long-term commitment characteristic of other major organizational changes.

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