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LIVES IN THE BALANCE: MANAGING WITH THE SCORECARD IN NOT-FOR-PROFIT HEALTHCARE SETTINGS

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Abstract

The use of balanced scorecards in not-for-profit health care settings is increasing. This paper critically analyses existing cases of their use to identify the main features of this application of the BSC. While there are many case studies in the literature, this paper integrates and critiques the use of the BSC across this sector. In particular the paper argues that the health of the patients is not as central as it should be in the development of the BSC; the balance is tilted towards the financial not the health outcomes. BSCs are still in an evolutionary stage in health care settings and strategy mapping is not yet common. In reviewing the past applications, the paper shows a way forward for future developments of the scorecard in health settings.

Introduction

In healthcare, the balanced scorecard is the current 'meal for today', with consultants advocating this 'miraculous treatment' (Aidemark, 2001, p.23). Its origins go back to the late 1980s with the earliest writings of Kaplan and Norton (1992, p.71) advocating a performance measurement system which would provide 'a set of measures that gives top managers a fast but comprehensive view of the business'. Four perspectives - financial, customer, internal business process, and learning and growth – are central to the measurement system. In subsequent development the perspectives were linked in a cause-and-effect manner by 'if-then' statements: If we increase capabilities, then lower re-admission rates will occur. If re-admission rates are lower, then patient satisfaction will increase. If patient satisfaction is higher, the hospital will attract more patients and increase its revenue. The BSC can help organisations to 'balance' (1) short-term and long-term objectives of the organisation; (2) the financial and non-financial measures of success; (3) the lagging (outcome) and leading (performance) indicators of performance; and (4) internal and external constituents of the organisation.

Healthcare organizations have had to meet some unique challenges in adapting the BSC to health care settings. Since 1994, when the first refereed article was published on the BSC in health care settings, numerous articles have appeared in the health services and management literature, as the BSC appears to have gone into a growth phase (Zelman, Pink et al. 2003). According to Zelman, Pink et al.'s study (2003), the BSC has been adopted by a broad range of health care organisations, including hospital systems, hospitals, psychiatric centres, and national health care organisations.

Although the BSC has been applied successfully many times as a strategic management tool; there is also evidence of many failures. Neely and Bourne (2000) claim a failure rate of 70%. Identifying features of successful implementations is therefore important.

In heath care, much of the literature relates to how to apply BSC successfully (for example, Chow, Ganulin et al. 1998, Stewart and Bestor 2000; Pink, Mckillop et al. 2001; Oliveira 2001; Fitzpatrick 2002, Shutt 2003, Tarantino 2003; Radnor and Lovell 2003a,b). Less common are surveys about applying BSC in health care. However, Chan and Ho (2000) conducted a survey of the BSC in Canadian hospitals in 2000 and Inamdar and Kaplan. (2002) surveyed executives in nine provider organizations in the USA. There is insufficient information about the overall pattern and success of BSC implementation in health care. This paper integrates all of the case studies to seek for common patterns and contrasts.

The paper is arranged as follows. The next section uses the research literature to develop three research questions. This is followed by a short methodology section and then the findings. The discussion section precedes the final conclusion.

Prior Literature

We have explored these cases using three research questions. Our first question was what were the perspectives used? This is one of the important decisions in BSC design – how many perspectives will there be and what will they be. It may have been anticipated that the focus of these scorecards would have been on patient health – on the change to the lives of the people who these healthcare institutions are trying to help. This was not always the case.

The second question was which specific performance measures are used within the scorecard? Most not-for-profit health organizations have a range of measures already in place. The scorecard assists in identifying the most critical measures for monitoring and developing strategy. The selection of measures should demonstrate the creativity in seeking measures which support strategic direction. In particular, we were interested in the learning and growth perspective which Marr and Adams (2004) argue is its weakest link. Frigo and Krumwiede (1999) reported that the majority of BSC users rate the effectiveness of the innovation perspective as 'less than adequate to poor' while Speckbacher et al. (2003) concluded that over 30 percent of the BSC users in their study has no 'learning and growth' perspective. Kaplan and Norton admit (1996b, p.144) that "this gap is disappointing since one of the most important goals for adopting the scorecard measurement and management framework is to promote the growth of individual and organisational capabilities".

The third question is: Which generation of scorecards are used? At least three different definitions of the stages of the evolution of BSC exist in the literature (Morisawa 2002; Miyake 2002, Lawrie and Cobbold 2004; Speckbacher, Bischof et al. 2003). All authors agree that the first generation BSC combines financial and non-financial indicators with the four perspectives (financial, customer, internal business process and learning and growth). At this stage, "measurement systems without cause–and-effect logic may also qualify as Balanced Scorecards" (Malmi 2001, p. 216). Speckbacher, Bischof et al. (2003) and Lawrie and Cobbold (2004) argue that the second generation BSC emphasised the cause-and-effect relationships between measures and strategic objectives. It became a strategic management tool, usually utilising a strategy map to

illustrate the linkage between measures and strategies. In contrast there is a view in the literature (Morisawa 2002, Miyake 2002) that the key contribution of second-generation BSC was the formal linkage of strategic management with performance management. According to Lawrie and Cobbold (2004), the third generation BSC is about developing strategic control systems by incorporating destination statements and optionally two perspective strategic linkage models. It used “activity” and “outcome” perspectives to instead of the traditional four perspectives (Lawrie and Cobbold 2004). Speckbacher, Bischof et al. (2003) suggested that the third generation BSC was the second generation containing action plans/targets and linked to incentives. A third view (e.g. Morisawa 2002; Miyake 2002) is that the concept of the strategy-focused organization (Kaplan and Norton 2001) reflected the third-generation application of the BSC. As Speckbacher, Bischof et al. (2003) seems the dominant view in the literature, it has been accepted here.

Research methodology

The research technique was to identify as many applications of the scorecard as possible in the health sector. The main sources were published papers and internet sites and so we were likely only to identify successful implementations. We searched Google and Google Scholar, as well as Ebsco Host and Science Direct academic databases – searching for several key words: balanced scorecard in hospital and health care. Then we investigated each of our research questions across the implementations.

Findings

We found 22 examples in the literature: 10 were from United States of America, 3 from the United Kingdom and Sweden respectively, 2 from Australia and New Zealand, and

one each from Canada and Taiwan. The 22 case studies were all not-for-profit organizations. A summary of the cases is found in Table 1.

Table 1 General information about 22 examples of BSC in health care organizations

Type of organization	Examples	Stage of BSC	Strategic or Performance management tool	No. of Perspectives	Top perspective	No. of Indicators	Source
Hospital Systems	Mayo Clinic, USA	II	Strategy	8	Insufficient information	13	Curtwright, Stolp-Smith et al
	Cambridge Health Alliance USA	I	Performance	4	Insufficient information	44	Hermann, Regner et al
	St. Mary's/Duluth Clinic Health System, USA	II	Strategy	5	Financial	25	VE web site
Hospital	Duke Children's hospital, USA	II	Strategy	4	Customer and Financial	22	VA web site
	Falls Memorial Hospital, International Falls, USA	II	Strategy	4	Quality & Safety Staff & Clinicians	37	Mohan
	Bridgeport Hospital, USA	II	Strategy	5	Insufficient information	18	Gumbus, Lyons et al
	Royal Ottawa Hospital, Canada	II	Strategy	5	Innovation and Growth, Care and Service	32	Web site
	Community Memorial Hospital(CMH), USA	II	Strategy		Insufficient information	13	Stewart and Bestor
	Royal Brisbane & Women's Hospital, AU	II	Strategy	4	Patients, Clients and staff, Process	26	Web Site
	Silver Cross Hospital, USA	II	Strategy	4	Quality and Financial Performance	27	Pieper
Psychiatric Centre	Hudson River Psychiatric Center, USA	II	Strategy	4	Financial and Customer	15	Wolfersteig and Dunham

Hospital department	A department of Swedish Hospital	II (Insufficient information)	Strategy	4	Insufficient Information	21	Kollberg and Elg
	A Hospice unit's of St. Elsewhere Hospital, USA	II	Strategy	4	Financial	11	Kershaw and Kerhaw
	One Clinic of Hogland Hospital, Sweden	II	Strategy	4	Insufficient information	16	Aidemark
	Emergency Department in a Hospital, Taiwan	II	Strategy	4	Insufficient information	9	Huang, Chang et al
National Healthcare System	Hospital Monitoring Directorate, NZ	I (Insufficient information)	Performance(Insufficient information)	4	Insufficient information	16	VA web site
	Mental Health Trusts and Providers of Mental Health Services, Healthcare Commission, UK	I (Insufficient information)	Performance (Insufficient information)	3	Insufficient information	35	Healthcare commission web site
Local Government	Nursing of Queensland Health , AU	I (Insufficient information)	Performance (Insufficient information)	3	Insufficient information	26	Queensland Health web site
	Long-term planning at Jonkoping County Council, Sweden	II	Strategy	4	User and Process/Productivity	14	Aidemark
	Bradford PCT, UK	II	Strategy	4	Client and Internal Process	30	Radnor and Lovell (a)
	Bradford HIMP, UK	II	Strategy	4	Client and Internal Process	29	Radnor and Lovell (b)
	South Canterbury District Health Board, NZ	I (Insufficient information)	Performance(Insufficient)	4	Insufficient information	16	VA web site

Perspectives

Kaplan and Norton (2001) have argued that organizations should develop the best set of dimensions that reflect their strategy. For not-for-profits they recommend that it can place their customers or constituents – not the financials – at the top of its BSC. Of the 22 examples the perspectives are shown in Table 1.

Table 2 Perspectives

	Number of examples	*Percentage*
Financial (and Synonyms)	19	86
Customer (and Synonyms)	17	77
Internal Business Process (and Synonyms)	20	91
Learning and Growth or Innovation and Learning (and Synonyms)	11	50
Other perspectives	14	64

Most used the financial and internal business process perspectives. We have treated terms such as economy, cost, and financial resources as synonyms for the financial perspective[1]. There are three examples without a financial perspective in the scorecard, but they have measures at a corporate level or outside of the scorecard.

Within their BSC, only 77% had a customer or patient perspective. This seems to be a problem with these scorecards; health outcomes for patients do not appear to be the central focus. Chan and Ho (2000) found that in Canada the financial and customer perspectives were weighted equally. Fifty percent used a learning and growth (or innovation and learning) perspective, which is relatively low but consistent with problems of implementing this perspective (Hoque and James 2000). Only three cases used the traditional BSC with the standard four perspectives; but rather they changed it to meet their specific strategies. In the twenty-two cases, fifteen had four perspectives,

[1] For example, a business & development perspective contained only financial measures. in an example, the business & development perspective is also classified as financial perspective.

three had five, two had three perspectives and one had eight perspectives. Some of the major variations in perspectives are shown in Table 3. One case did not use perspectives but instead had twelve non-financial measures and one financial measure. Kaplan and Norton's approach appears to be the template for implementations in health care, no matter how they were modified in practice.

Table 3 Modified Balanced Scorecard Perspectives used

Example	Modified Perspectives
Duke Children's Hospital Balanced Scorecard, USA	Research, Education & Teaching
Falls Memorial Hospital, International Falls, USA	Staff & Clinicians Quality Patients & Community Business & Development
Bridgeport Hospital, USA	Volume and Market Share Growth Quality Improvement Process Improvement Organizational Health
Royal Ottawa Hospital, USA	Innovation and Growth Research Care and Service Systems Integration
Hospital Monitoring Directorate, NZ	Organization Healthcare & Learning Process & Efficiency Patient and Quality
Nursing Balanced Scorecard, Queensland Health, AU	Patient/client indicators Staff Indicators Organization Indicators
Mayo Clinic, USA	Clinical Productivity and Efficiency Mutual Respect and Diversity Social Commitment External Environmental Assessment Patient Characteristics
South Canterbury District Health Board, NZ	Quality and Patient Satisfaction Process and Efficiency Organizational Health
Cambridge Health Alliance Behavioral Health Services, USA	Satisfaction Clinical Access/Continuity Cost/utilization
St. Mary's/Duluth Clinic Health System, USA	Operational People Technical
Mental Health Trusts and Providers of Mental Health Services, UK	Clinical Focus Patient Focus Capacity and Capability
Royal Brisbane & Women's Hospital, AU	Patient, clients and staff

A department of a Swedish Hospital	Learning/innovation Customer/patient Process/productivity
Clinic of Hogland Hospital, Sweden	Economy
Long-term Planning at Jonkoping County Council, Sweden	User Perspective
Silver Cross Hospital, USA	Quality Operational Effectiveness Workplace Excellence
Bradford PCT and Bradford HIMP, UK	Client perspective (Government and User) Cost Perspective

Performance measures

In practice, how many indicators should be involved in a BSC top level is a difficult problem faced in every organization applying the BSC. We found a wide number of measures - from 13 to 44. The upper bounds of these numbers seem to be well above the recommended levels in the literature (Kaplan and Norton 1996), and beyond the ability of managers to focus on them.

The financial perspective in a for-profit setting would show the results of the organization's strategy from the other perspectives. In a not-for-profit and public sector setting it would show that the organization achieves its results in an efficient manner that minimizes cost (Olve, Roy et al. 2000). We found two groups of measures in this perspective – revenue growth indicators and productivity indicators.

Table 4 Measures used in the Financial Perspective

	Indicators
Revenue growth indicators	Growth in net revenues, volume growth by key service line, amount/sources of funds raised, number of contracts received, increase in contracts, percentage of contracts relative to competition, dollars generated from new contracts, patient census, competitive position, market share, referrals and use, dollars raised from community (number and dollars of corporate gifts, level of fund-raising activity for the hospital, etc), funds raised for facility improvements, payer mix (%commercial), number of outpatient visits, research grants, cardiology cases per month, etc.

Productivity indicators	Profit, operating margin, depreciation, amortization and expense expressed as a percentage of net revenue, total assets by net revenue, current ratio, unit profitability (cost per case, cost per discharge), supply expense and pharmacy expense, personnel cost, reduced cash outlays, general drug prescribing, operations within budget (overtime, unit expenditures), length of stay, operating room supply expense per surgical case, etc.

It is noticeable that some indicators relate to long-term dimensions in this perspective; such as competitive position, market share, payer mix (% commercial), dollars raised from community, and research grants. Market share, especially for targeted customer segments, reveals how well a health facility is penetrating a desired market. The measure of market share with targeted customers would balance a pure financial signal (sales) to indicate whether an intended strategy is yielding expected results (Kaplan and Norton 1996), linking the BSC to strategy.

The customer perspective describes “the ways in which differentiated, sustainable value is to be created for targeted customer segments, how customer demand for this value is to be satisfied, and why the customer will be willing to pay for it” (Olve, Roy et al. 2000. p. 61). These examples show some important factors, such as patient retention, patient acquisition, and patient satisfaction. Staff measures were sometimes listed under this perspective because of their critical importance to patient satisfaction.

Table 5 Measures in the Customer Perspective

Customer Perspective	Indicators
Patient retention	e.g. patient retention, % patient would recommend, number of contracts renewed, etc.
Patient acquisition	e.g. number of new contracts per period, market share, etc.
Patient satisfaction	***Patient satisfaction and interrelated factors*:** Patient satisfaction was adopted by 19 of the 22. Patient referral rate reflects patient satisfaction. ***Factors that influence patient satisfaction:*** e.g. patient waiting time, access, accurate diagnosis rate, accurate test rate, incidents, hospital-acquired infections, discharge timeliness, unplanned readmissions, hospital food, number of best practice initiatives, ***Payers' satisfaction:*** for example, Health Maintenance Organizations' satisfaction (number of contracts), stakeholder satisfaction with services (quality of services, complaints, public opinion). ***Staff satisfaction:*** staff satisfaction (employee satisfaction, physician satisfaction, retention rate, absentee rate, turnover rate). ***Image and reputation:*** reputation, number of referrals, community satisfaction, increased community support, increased donations, favourable press coverage featuring doctors/staff, advertising budget per bed, etc.

Hospital food was identified as an important indicator of influencing patient satisfaction by the UK Healthcare Commission (Mental Health Trusts and Providers of Mental Health Services) and some hospitals directors in USA (Chow, Ganulin et al. 1998). The indicators which relate to image and reputation are important for the operation of healthcare organizations.

In relation to internal business processes, an organization can accomplish two vital components of its strategy: producing and delivering the value proposition for customers and improving processes and reducing costs for the productivity component in the financial perspective (Kaplan and Norton 2004). These are seen in Table 6.

Those indicators of operations may in fact be measures of patient satisfaction as well as drivers of customer satisfaction.

Table 6 Measures of Internal Business Processes

Internal business perspective	*Indicators*
Patient satisfaction	Length of stay, case cancellations, waiting time, discharge, readmission rate, mortality index, number of patient falls, call centre response time, claim processing accuracy, weekly patient complaints, % emergency patients triaged within 15 minutes of arrival; mortality index, billing and collections/posting time, etc.
Safety and health	Risk management, for example, infection rate, coding error rate (clinic and hospital), medication errors per dose, occupational injuries, restraint usage, serious incidents, perfect orders (reduce errors), etc.
Productivity	Cost per patient day; cost per diagnosis; cost per produce; per case cost, daily staffing vv. occupancy, resource utilisation ratio, percentage of occupied beds, hours per unit of activity, resource utilization ($ value of outputs/net operating costs), performance against contract ($ value of outputs/$ value of contract), etc.
Innovation	Product innovation, staff training, number of physicians using online hospital clinical information systems, employee turnover rate, etc.

These BSCs incorporate innovation processes into to the internal business perspective. This is a difference between the BSC and a traditional performance system which focuses on the processes of delivering services to present customers (Kaplan and Norton 1996).

The learning and growth perspective enables the organization to ensure its capacity for the long-term run. It describes the organization's intangible assets and their role in strategy, and organizes intangible assets into three categories (Kaplan and Norton 2004):

Human capital: The availability of skills, talent, and know-how required to support the strategy.

Information capital: The availability of information systems, networks, and infrastructure required to support the strategy.

Organization capital: The ability of the organization to mobilize and sustain the process of change required to execute the strategy.

In this perspective we found all the factors mentioned above in these examples:

Table 7 Measures of Learning and Growth

Learning and Growth Perspective	*Indicators*
Human capital	Staff development, including training times, continuing education credits per FTE, publications, tuition reimbursement dollars spent per year, percentage of clinical staff who receive change management training, board leader/skills and knowledge,
Information capital	Strategic database (availability, use), work design, computer networks and training, key infrastructure targets, etc.
Continuous innovation	Number and quality of new services offered in past five years, new research projects, number of institution/agencies participating in joint activities, etc.
Organization capital	Staff satisfaction levels, employee survey rating, staff turnover, staff retention, sickness rate, absenteeism, leadership survey, leader approval rate, strategic alliances, culture of improvement, communication, enhance employee motivation and empowerment (decision-making participation, performance improved activities), etc.

Workplace injuries, incidents also appear in this perspective. This kind of indicators reflected the results of human capital and organization in a sense.

We found (Table 1) that more than 70% of the examples emphasise cause-and-effect relationships or the links between strategy and its elements (using BSC as a strategic management tool). This suggests that most examples were second or third generation BSC. We cannot be certain that they are using full strategy maps. We did anticipate that not-for-profit and government hospitals might place their patients at the top of their strategy maps. For half of the examples where we could recognize hierarchical relationships among the perspectives, there was no customer (or patient) perspective that was on the top level in the BSC on its own. By contrast, two of the eleven examples put the financial perspective on the top of their BSCs.

Discussion

Performance measurement is not a new concept to the healthcare industry. “Hospitals have been using metrics for a long time, longer than most other organizations… Technology has enabled hospital leadership to collect and distribute vast amounts of data; benchmarking process that allow healthcare organizations to measure their performance against industry averages have been in place since the late 1970s” (Pieper 2005, p.9). Since the 1990s, health care organizations have had to face greater pressures from society, for example, increased payer power and constraining regulations. They balance complex tradeoffs among cost, quality, access, and consumer choice (Inamdar and Kaplan, 2002). “When dramatic changes are inevitable, developing a strategic focus and examining the business and quality of the health care in a measurable and repeatable manner become each organisation’s opportunity” (Meliones, Ballard et al. 2001, p. 28). So it is not surprising that so many health care organizations chose to apply BSC and their BSC practices had unique characteristics. BSC in healthcare organizations presents a different picture compared to other industries. For example, most health cases used other perspectives in their BSCs, but Speckbacher, Bischof et al.’s (2003) survey in German-speaking countries only 17% of the companies used other perspectives. The use of the learning and growth perspective was similar, but there was less use of the customer perspective. Our findings were also consistent with Voelker, Rakich et al. (2001). In healthcare, the BSC scorecard appears more diverse than in the business and academic sectors.

Balancing People and the Organization

In a hospital, all efforts to achieve balanced accountability for cost, quality and care are critically dependent on physician attitudes, beliefs, and behaviours (Atchison and Bujak 2001). The autonomous culture of physicians and the importance of long-term outcomes are both aspects of health care that have few analogies in other industries (Zelman, Pink et al. 2003). More generally, the role of professionals is important to the role of hospitals, so in some examples, 'People' or 'Staff' became an independent perspective. We concur that when human resources are so critical to strategy implementation they should be another perspective.

Balance between Community and Customer

In not-for-profit and public sector hospitals the focus may be on the patient as customer, and serving their needs for achieving the mission (Niven 2003). However, focus on the patient or client is not enough for healthcare organizations, they have to achieve a balance between community and patient. For example, in many public health programs, it is difficult to define the clients who are in need of or who benefit from a service because they target the entire community (Woodward, Manuel et al. 2004). Some services such as quarantine are mandated and must be provided regardless of the view of the public (Woodward, Manuel et al. 2004). "Consumers" of public health services sometimes have difficulty in judging services because their preventive and long-term nature may not reflect the entire population at risk (Blendon, Kim, et al 2001; Woodward, Manuel et al. 2004). At the same time, the health care system has to strive for an equitable distribution of services based on health needs. Usually those with the lowest health needs are the most dissatisfied and have the highest expectations; and seeking to solve their concerns could result in new inequities and gaps in health

outcomes (Woodward, Manuel et al. 2004). That is why some systems rated by experts as high quality can be much more poorly rated by consumers (Blendon, Kim, et al 2001). For these reasons, experts claimed that the emphasis for public health should be changed from "client or patient satisfaction" to "community engagement" (Woodward, Manuel et al. 2004). "The community", consisting of citizens, high-risk groups, health care providers, government policy makers, and health department staff, can contribute unique and valid perspectives on public health performance (Woodward, Manuel et al. 2004). Hence the appearance of 'Community' as an independent perspective in health care organization's BSC is not surprising.

An improvement in efficiency is a limited perspective in the healthcare industry because in practice they have to balance efficiency and fairness, and balance between cost, quality, access, and consumer choice (Inamdar and Kaplan, 2002). This is a significant difference between healthcare and other industries.

Perspectives

So in relation to our first question, we found that few of them were typical BSCs with the traditional four perspectives; most of them modified the four perspectives according to their institution's current conditions and different understanding of the perspectives. For example, one institution had the perspectives as client, cost, learning and growth, and internal process perspective; another one has financial, innovation and growth, care and service, systems integration, and research.

Edenius and Hasselbladh (2002) (p. 259) cite the view of an implementer, a project manager:

"I don't think it is important what we call the different perspectives, it's more important to capture all the critical success factors. To cover these in the card is more important than what you call them."

The BSC is a conceptual tool (Sasse 2005), and the four perspectives were never considered as a 'strait-jacket' (Kaplan and Norton 1996). Its adaptability is part of its attraction.

Performance Measures

Identifying critical success indicators is a very important step in the process of building a BSC, especially for healthcare organizations, because usually they have a habit of collecting large amounts of data without really analysing whether those measures impact performance. Critical indicators should be selected for their ability to predict opportunities and problems (Pieper 2005).There are usually two questions at this stage: how many indicators should we choose and what kind of indicators should we choose?

Kaplan and Norton (1996) suggested a BSC should not exceed four or five indicators for each perspective; for a total of 20-25 indicators to be tracked closely. For managerial purpose it is important to reduce the number of measured and reported indicators. The problem of the number of indicators includes the costs or resources tied up in the measurement process, for collecting and analysing the data, reporting the indicators, and interpreting them so as to decipher signals from noise.

Through these samples, we found diverse forms of the BSC. Some of the measures occurred in different perspectives. One measure can be related to multiple goals. For

example, patient satisfaction as an overall indicator can be used in the customer perspective or the internal process perspective. It also can be partially explained by waiting time, call centre response time, weekly patient complaints.

The experience of Bridgeport BSC perhaps reflects a general picture about the indicator problem: “Initially the card focused 12 critical success factors that were created by 56 metrics in FY 2000. In FY 2001, the five critical success factors were created and their metrics will be reduced to 35 this year. Further enhancements for FY 2002 include reducing the number of critical success factors from five to four by combining Quality and Process Improvement”(Gumbus, Lyons et al. 2002, p. 50).

Generation of Scorecards

Our third question related to the generation of BSC used. In particular, had they at least advanced to developing cause-and-effect relationships? Emphasizing cause-and-effect is a watershed between the first and second generation BSC. These examples demonstrate considerable flexibility in applying the BSC. However, Table 1 demonstrates that all BSCs in the healthcare field appear to be at stage 1 or 2. This may be because implementations are relatively new. It is possible that stage 2 is sufficient for strategic implementation in healthcare.

Finally, we return to the focus of healthcare services - patients. Although all the examples included patients in some parts, there was not a single example where the patient or customer perspective was at the top of the BSC. Why not? The core of healthcare service, improved health outcomes for patients, did not become the primary focus of these scorecards.

Conclusion

This paper has drawn together and analysed the published cases of BSC in health care. It is possible that some excellent examples of BSC in health care are not yet published or have been missed by our research approach. Our analysis was limited by using information from papers which sometimes were very limited. A future research project could investigate the characteristics of unsuccessful implementations – ineffective and short-lived. We suggest that a more comprehensive view would come from a cross-national survey of best practice use of the BSC in healthcare; an interesting project for future research.

Although this research has limitations, our findings provide some important insights into the current state of the use of BSC in healthcare. The examples show the diversity of BSCs. In health care organizations, there are more modification requirements in applying BSC than in other industries. Few organizations are treating Kaplan and Norton or other formulas as a strait jacket.

Modifications of the scorecard have led to the evolution of the BSC. Whatever the number of generations ahead, they will be developed based on a single (and original) set of macro principles developed by Kaplan and Norton. In health care organizations' practices, the second generation BSC as a strategy management tool still appears to be the mainstream. Although the Lawrie and Cobbold two perspectives' BSC approach has been introduced and applied, Kaplan and Norton's four perspectives still has important impact on the practices in healthcare organizations.

A core principle of BSC remains balance. We can foresee that the future BSC will not have fixed form other than balance. In the process of applying BSC, organizations seek for balance and harmony between long-term and short-term, financial and non-financial, individual and organizational, internal and external factors, cause-and effects, and efficiency and fairness, particularly in the healthcare industry. Our concern is that the needs of patients have not reached the centre of the BSC in healthcare. Lives are difficult to balance and most countries are struggling to contain health costs. We do not underestimate the importance of the other perspectives but we argue that for not-for-profit and government providers, patient needs much be more central to the BSC.

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