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Lives in the balance: an analysis of the balanced scorecard (BSC) in healthcare organizations

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Abstract

Purpose – The purpose of this paper is to show how the balanced scorecard (BSC) has been a prominent innovation in strategic performance measurement systems. The health care sector has started to adopt this approach.

Design/methodology/approach – There are many case studies of BSC applications and this paper reviews this literature to analyse the application of the BSC across this sector. In particular, it is argued that the current applications do not tend to show the health of patients as being central 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.

Findings – The 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 this research approach. This 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. It is suggested that a more comprehensive view would come from a cross-national survey of best practice use of the BSC in health care; an interesting project for future research.

Originality/value – In reviewing the past applications, the paper shows a way forward for future developments of the scorecard in health settings.

Keywords Balanced scorecard, Health services

Paper type Conceptual paper

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Introduction

In healthcare, the balanced scorecard is the current "meal for today", with consultants advocating this "miraculous treatment" (Aidemark, 2001, p. 23). The healthcare industry has a long tradition of extensive and detailed performance measurement (Pieper, 2005). It seem clichéd to focus on increased competitive pressures; but these are very apparent in health care in many countries – ageing populations increasing demand, improved treatments which are wanted by more people, shortage of skilled health care workers, and governments seeking to reduce their financial involvement. In this context, performance measurement is seen as having a key role: "When dramatic changes are inevitable, developing a strategic focus and examining the business and

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quality of the health care in a measurable and repeatable manner becomes each organisation's opportunity" (Meliones *et al.*, 2001, p. 28).

The Healthcare organizations have had to meet some unique challenges in adapting the BSC to their environment. 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 *et al.*, 2003). According to Zelman *et al.*'s (2003), study 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 percent. 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 *et al.*, 1998; Stewart and Bestor, 2000; Pink *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 is: What are the perspectives used? The earliest BSC papers (Kaplan and Norton, 1992) advocated the use of the four perspectives – financial, customer, internal business process and learning and growth. Subsequent developments brought about the inclusion of other perspectives such as sustainability (Brignall, 2002). In the development of the literature Kaplan and Norton (2001) developed a perspective labelled "Mission" for not-for-profit organisations. The choice of perspectives remains one of the most important decisions in BSC design – how many perspectives will there be and what will they be? It was anticipated that the focus of these scorecards, especially those in the not-for-profit sector, would have been on patient health – on the change to the lives of the people who these healthcare institutions are trying to help.

The second question is: Which specific performance measures are used within the scorecard? Most health organizations have a range of measures already in place. Pieper (2005, p. 9) notes:

> 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 processes that allow healthcare organizations to measure their performance against industry averages have been in place since the late 1970s.

The BSC is supposed to assist in identifying the most critical measures for monitoring and developing strategy. The selection of measures should demonstrate the creativity

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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 the BSC's 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". Speckbacher *et al.* (2003) concluded that over 30 percent of the BSC users in their study had no learning and growth perspective; not, presumably, through any lack of knowledge of this perspective, but the very difficulty of finding measures. Kaplan and Norton (1996, p. 144) admit 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 *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 *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. They used "activity" and "outcome" perspectives to instead of the traditional four perspectives (Lawrie and Cobbold, 2004). Speckbacher *et al.* (2003) suggested that the third generation BSC was the second generation but adding 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 *et al.*'s (2003) view appears to be dominant in the literature, it has been accepted here.

Research method

The ideal research method to answer these questions would be to conduct in-depth analysis of multiple BSC cases by collecting primary data; or at least conduct surveys in several countries. This remains a desirable approach, although very research intensive. As a first step, this paper uses secondary data and analyses the published research in the area by identifying as many BSC cases in the health sector. There is a clear bias with this method; as implementations viewed as unsuccessful are not likely to be written up. Nevertheless, this secondary data is an invaluable resource to compare and contrast approaches to the BSC in the sector.

The first step was to identify as many published papers as possible. The initial search was conducted in early 2005 and extended to cover all papers until the end of 2005. Google and Google Scholar were used to non-refereed papers, professional presentations and conference papers. In addition, two academic data bases were used

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– Ebsco Host and Science Direct. Three types of papers were found – case studies of implementations, theoretical papers arguing for the virtues of the BSC and exploring issues in its use, and the two survey papers previously mentioned (Chan and Ho, 2000; Inamdar and Kaplan, 2002). This research focuses on the case studies of implementations with some use of the two surveys.

Findings

We found 22 case studies in the literature: ten were from the USA, three from the UK and Sweden respectively, two 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 I.

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. The perspectives used in the cases are shown in Table II.

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 had measures at a corporate level or outside of the scorecard.

Within their BSC, only 77 percent had a customer or patient perspective. This seems to be a problem with these scorecards; health outcomes for patients, in these cases, are not the central focus. Chan and Ho (2000) found that in Canada the financial and customer perspectives were weighted equally. A total of 50 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 22 cases, 15 had four perspectives, three had five, two had three perspectives and one had eight perspectives. Some of the major variations in perspectives are shown in Table III. One case did not use perspectives but instead had 12 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.

Selection of 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 *et al.*, 2000). We found two groups of measures in this perspective – revenue growth indicators and productivity indicators (see Table IV).

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

Type of organization	Organization	Approximate date	Stage of BSC	Strategic or performance management tool	Number of perspectives	Top perspective	Number of indicators	Source
Hospital system	Mayo Clinic, USA	2000	II	Strategy	8	Unclear	13	Curtwright *et al.* (2000)
	Cambridge Health Alliance, USA	2000	I	Performance	4	Unclear	44	Hermann *et al.* (2000)
	St Mary's/Duluth Clinic Health System, USA	2002	II	Strategy	5	Financial	25	Balanced Scorecard Collaborative Inc. (2002)
Hospital	Duke Children's Hospital, USA	1999	II	Strategy	4	Customer and financial	22	VA web site (1900)
	Falls Memorial Hospital, International Falls, USA	2004	II	Strategy	4	Quality and safety, staff and clinicians	37	Mohan (2004)
	Bridgeport Hospital, USA	2002	II	Strategy	5	Unclear	18	Gumbus *et al.* (2002)
	Royal Ottawa Hospital, Canada	2005	II	Strategy	5	Innovation and growth, care and service	32	Royal Ottawa Hospital (n.d.)
	Community Memorial Hospital(CMH), USA	2000	II	Strategy		Unclear	13	Stewart and Bestor (2000)
	Royal Brisbane and Women's Hospital, AU	2005	II	Strategy	4	Patients, clients and staff, process	26	Royal Brisbane & Women's Hospital Service District (2005)
	Silver Cross Hospital, USA	2005	II	Strategy	4	Quality and financial performance	27	Pieper (2005)
Psychiatric Centre	Hudson River Psychiatric Center, USA	1998	II	Strategy	4	Financial and customer	15	Wolfersteig and Dunham (1998)

(*continued*)

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Type of organization	Organization	Approximate date	Stage of BSC	Strategic or performance management tool	Number of perspectives	Top perspective	Number of indicators	Source
Hospital department	A department of Swedish Hospital	2004	II [a]	Strategy	4	Unclear	21	Kollberg and Elg (2004)
	A hospice unit's of St Elsewhere Hospital, USA	2001	II	Strategy	4	Financial	11	Kershaw and Kershaw (2001)
	One clinic of Hogland Hospital, Sweden	2001	II	Strategy	4	Unclear	16	Aidemark (2001)
	Emergency department in a hospital, Taiwan	2004	II	Strategy	4	Unclear	9	Huang *et al.* (2004)
National health-care system	Hospital Monitoring Directorate, NZ	2004	I [a]	Performance[a]	4	Unclear	16	Hospitals Monitoring Directorate (2000)
	Mental Health Trusts and Providers of Mental Health Services, Healthcare Commission, UK	2004	I [a]	Performance[a]	3	Unclear	35	Healthcare Commission (2004)
Local government	Nursing of Queensland Health, AU	2002	I[a]	Performance[a]	3	Unclear	26	Queensland Health (2002)
	Long-term planning at Jönköping County Council, Sweden	2001	II	Strategy	4	User and process/productivity	14	Aidemark (2001)
	Bradford PCT, UK	2003	II	Strategy	4	Client and internal process	30	Radnor and Lovell (2003a)
	Bradford HIMP, UK	2003	II	Strategy	4	Client and internal process	29	Radnor and Lovell (2003b)
	South Canterbury District Health Board, NZ	2003	I [a]	Performance [a]	4	Unclear	16	South Canterbury District Health Board (2003)

Note: [a] Insufficient information to be definitive

Table I.

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It is noticeable that some indicators relate to long-term dimensions in this perspective; such as competitive position, market share, payer mix (percentage 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 *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 (see Table V).

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

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) which we have followed: Human capital, information capital and organization capital. All three forms of capital are found in the case studies as shown in Table VII.

Workplace injuries, incidents also appear in this perspective, which are a form of reducing human capital.

Table II.
Perspectives

	Number of cases	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

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Example	Modified perspectives
Duke Children's Hospital Balanced Scorecard, USA Falls Memorial Hospital, International Falls, USA	Research, education and teaching Staff and clinicians Quality Patients and Community Business and 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 and learning Process and 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 A department of a Swedish Hospital	Patient, clients and staff Learning/innovation Customer/patient Process/productivity
Clinic of Hogland Hospital, Sweden Long-term planning at Jönköping County Council, Sweden	Economy User perspective
Silver Cross Hospital, USA	Quality Operational effectiveness Workplace excellence
Bradford PCT and Bradford HIMP, UK	Client perspective (government and user) Cost perspective

Table III. Modified balanced scorecard perspectives used

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Table IV.
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 (percent commercial), number of out-patient 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.

Table V.
Measures in the customer perspective

Customer perspective	Indicators
Patient retention	For example: patient retention, percent patient would recommend, number of contracts renewed, etc.
Patient acquisition	For example: 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.

Generation of scorecards

We found (Table I) that more than 70 percent 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 scorecards. For half of the examples where we could recognize hierarchical relationships among the perspectives, there was no customer (or

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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 product; per case cost, daily staffing vs 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

Table VI. Measures of internal business processes

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 institutions/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.

Table VII. Measures of learning and growth

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

Perspectives

So in relation to our first question, we found that few of the scorecards 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. For example, one institution had the perspectives as client, cost,

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learning and growth, and internal process perspective; another one had 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.

So BSC in healthcare organizations presents a different picture to other industries in relation to the range of perspectives. For example, most health cases used other perspectives in their BSCs whereas a survey in German-speaking countries found that only 17 percent of the companies used other perspectives (Speckbacher *et al.*, 2003). The use of the learning and growth perspective was similar, but there was less use of the customer perspective. Our findings are consistent with Voelker *et al.* (2001). In healthcare, the BSC scorecard appears more diverse than in other sectors.

One different perspective is "People". In health care, all efforts to achieve balanced accountability for cost, quality and care are critically dependent on physician attitudes, beliefs, and behaviours (Atchison and Bujak, 2001); as well as the attitudes of nursing and other professionals. In particular, the autonomous culture of physicians and the importance of long-term outcomes are aspects of health care that have few analogies in other industries (Zelman *et al.*, 2003). So, as the role of professionals is important to the role of hospitals, 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.

Another different perspective is "Community". In health care the focus may be on the patient as customer, and serving their needs for achieving the mission (Niven, 2003). However, this appears insufficient; 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 benefits from a service because they target the entire community (Woodward *et al.*, 2004). Some services such as quarantine are mandated and must be provided regardless of the view of the public (Woodward *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 *et al.*, 2001; Woodward *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 *et al.*, 2004). As a result, some systems rated by experts as high quality can be much more poorly rated by consumers (Blendon *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 *et al.*, 2004); the "community", consisting of citizens, high-risk groups, health care providers, government policy makers, and health

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department staff. 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.

Performance measures

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. 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, or 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 *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 I 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?

Conclusion

The reflections on the present level of practise of the BSC are useful for both academics and practitioners. The 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

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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. Few organizations are treating Kaplan and Norton or other formulas as a strait jacket. This is an encouraging sign for the sector which has taken up the basic tool of the BSC and applied it in rich and diverse ways. The lack of consistency does not enable benchmarking; but in the early application of the BSC there has been some rich experimentation which might lead to more consistent approaches in the longer term. If the BSC is to be a strategic implementation tool, as Kaplan and Norton (2001) have argued, then there will always be some differences due to the different strategic orientations of health care organisations. We encourage health care organisations to work in groups of like organisations to produce scorecards which are both comparable but meet their own strategic needs.

Outside of the health sector there has been a gradual evolution of the BSC. While academics and practitioners claim we are in the third generation; there may be more evolution to continue. However, whatever the number of generations ahead, they are likely to be developed based on a single (and original) set of macro principles developed by Kaplan and Norton. In health care practices, the second generation BSC of a strategic management tool 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.

We return to our central contention of the lives of healthcare recipients. 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, especially for not-for-profit and government providers, patient needs must be more central to the BSC.

Note

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

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