The design of Performance Monitoring Systems in Healthcare Organizations : a stakeholder perspective

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Abstract

Monitoring the hospital's performance is evolving over time in search of more efficiency by integrating additional levels of care, reducing costs and keeping stuff up-to-date. To fulfill these three potentially divergent aspects and to monitor performance, healthcare administrators are using dissimilar management control tools. To explain why, we suggest to go beyond traditional contingent factors to assess the role of the different stakeholders that are at the heart of any healthcare organization. We rely first on seminal studies to appraise the role of the main healthcare players and their influence on some organizational attributes. We then consider the managerial awareness and the perception of a suitable management system to promote a strategy-focused organization. Our methodology is based on a qualitative approach of twenty-two case studies, lead in two heterogeneous environments (Belgium and Lebanon). It allows us to illustrate, for each healthcare player, its positioning within the health-systems. Thus, we define how his role, perception and responsiveness manipulate the organization's internal climate and shape the design of the performance monitoring systems. Our findings are expected to add knowledge on the reasons of the choice of adequate management systems, within three different healthcare organizational structures.

Keywords: *HealthCare Organizations, Performance Monitoring Systems, Contingency Theory, Qualitative Approach, Theory of Leadership.*

Résumé

Le pilotage de la performance hospitalière évolue au fil du temps à la recherche de plus d'efficacité en intégrant de niveaux processus de soins, en réduisant les coûts et en essayant de maintenir un niveau de qualité supérieure. Pour remplir ces trois aspects potentiellement divergents et pour évaluer la performance, les administrateurs de soins de santé utilisent différents outils de contrôle de gestion. Pour expliquer ce phénomène, nous vous proposons d'aller au-delà des facteurs contingents traditionnels pour illustrer le rôle des différents acteurs qui sont au cœur de toute organisation de soins de santé. Nous comptons d'abord sur des une revue de la littérature spécifique en contexte de gestion hospitalière pour analyser le rôle des principaux acteurs de la santé et leur influence sur certains attributs organisationnels. Nous examinons ensuite le rôle du Manager hospitalier et sa perception d'un système de contrôle de gestion approprié pour promouvoir une stratégie. Notre méthodologie est basée sur une approche qualitative de vingt-deux études de cas, comparatives de deux environnements hétérogènes (la Belgique et le Liban). Notre méthodologie nous permet d'illustrer, pour chaque acteur, son positionnement dans les systèmes de soins. Ainsi, nous définissons comment son rôle, sa perception et sa réaction manipulent le climat interne de l'organisation hospitalière et les systèmes de pilotage de la performance. Nos résultats visent à enrichir nos connaissances sur les conditions du choix d'un système de gestion approprié, tenant compte de trois structures organisationnelles de soins de santé.

Mots-clés: *Organisations de soins de santé, Systèmes de pilotage de la Performance, Théorie de la Contingence, Approche Qualitative, Théorie de « Leadership ».*

Introduction

In a period of significant and rapid changes, healthcare organizations (HCOs) are searching for providing better services through delivering the best quality of care at the lowest costs (WHO, 2000). Monitoring performance in HCOs appears then evolving over time due to a continuous search for better quality, efficiency and timeliness. For reducing costs and keeping stuff up-to-date, healthcare managers are using dissimilar management systems to stimulate performance. They are generally devoting their efforts to promote their traditional systems towards a balance between a fast technical evolution, additional exigent patients (Ginter, Duncan and Swayne, 2002) and congruence of goals.

However, a limited number of empirical scientific studies examines the role of the major healthcare stakeholders. In particular, few publications deal with issues of stakeholders, the managerial decision-making and the management control processes. While largely integrated in other managerial contexts (Kabwigiri and Van Caillie, 2006), most of the contingent-based researches ignore the variable "goal ambiguity" and ignore how "competing interests" are perceived by healthcare managers.

So, the main interest of our empirical study is to appraise how healthcare managers can foster strategic "alignment" in chaotic environments. To investigate this subject, we rely first on seminal studies to appraise the role of the main healthcare players and their influence on some organizational attributes. We then consider the managerial awareness and the perception of a suitable management control system (MCS) to promote a strategy-focused organization.

Our methodology is based on a qualitative approach of twenty-two case studies, lead in two heterogeneous environments (Belgium and Lebanon). This method allows to illustrate, for each healthcare player, his positioning within the healthcare systems. Thus, we define how his role, his perception and his responsiveness manipulate the organization's internal climate and shape the design of the performance monitoring systems (PMS). Our findings are expected to add knowledge on the reasons of the choice of adequate MCS, within three different HCOs' structures: university, general/university and general hospitals.

Context and hypotheses

During forty years of hasty evolutions (at the demographic, social, political or economic levels), a transition from an initially simply complex to a turbulent and uncertain environment has shaped the healthcare industry in all nations (Boyne, 2002). From a holistic perspective, public governments have simultaneously focused

essentially their attention on managing the competing demands of autonomy and accountability (Groot, 1999). Despite the observed diversities of contexts and intrinsic characteristics, researchers have however highlighted inflated rates of spending that have outstripped the national wealth in many countries.

Governments have elaborated rules and regulations to guarantee the adequate sector's evolution and the organizational survival (OECD, 2006). So, they have developed rationalized policies to balance the shift of supply and demand for a better care (Alexander, Weiner and Bogue, 2001). In many cases, governments seek improvements by using traditional methods such as: (a) Patient Medical Records to identify the population served (Adler et al., 2003); (b) methods to collect and pool the resources (OECD, 2003); (c) manuals to elaborate the projected budgets and/or (d) global work plans to manage the "Patient Safety". Their policies appear generally limited to some regulatory inspections, public satisfaction surveys, third-party assessments or to several statistical reports. Their reports, especially, consider the purpose of the study, the national context, the adopted methodologies and the performance assessments in terms of percentages, but not really in terms of true strategic indicators allowing action.

Proposal a: Governments, as major owners, providers and supervisors of key resources, elaborate healthcare reform's rules and regulations. So, they indirectly encourage the evolution of the MCSs towards the follow-up of their legislation's execution.

When considering the entity level, healthcare authorities become responsible for interpreting, responding to and implementing public policies (Bouillon et al., 2006). The healthcare board is then asked to accommodate the complex and often divergent demands of regulations, the multiple market forces, the community's interests and the organization itself (Alexander, Weiner and Bogue, 2001). Moreover, his ability to respond to more exigent patients is also required. To spread risk and to deal with the environmental constraints, healthcare authorities are mobilizing then their strategic networks (Gittell and Weiss, 2004). Generally, their arrangements modify the organizational structures, leading towards mergers, closures and funding restraints (Chan and Lynn, 1998).

Proposal b: In response to public regulations and additional exigent patients, the healthcare authorities tend to adopt the contemporary PMS.

In response to both this evolution towards an increasing turbulent environment and this increase of competing demands from the multiple stakeholders involved, HCOs are now asked to provide a cost-effective operational system (a good level of quality within limited budgets, WHO, 2008), an open, safe and timely outcome (patients' access and length of stay) and a meaningful strategic positioning. Due to their diversities, they react

differently, so that researchers are now able to identify several organic structures (Dess and Shaw, 2001) to describe the complexity and accounting dissimilarities between healthcare organizations.

As a result to these arrangements, HCOs are now facing consecutive critical crossroads, leading to an ever more formalized structure focusing their efforts on reducing their costs and diverting their savings towards therapy and preventative care. Healthcare managers tend then to implement sophisticated management information systems (Gittel and Weiss, 2004) that can spell performance.

Proposal c: Healthcare authorities are affecting the organizational life-cycle, stage of development, size, and structure of the organization. They are held accountable for providing the adequate resources; simultaneously, their consent and commitment are fundamental while adopting the PMS.

Creating an autonomous self-governed hospital in such circumstances is not easy (Gittell and Weiss, 2004), due to the fact that healthcare administrators have to accommodate the requirements of the providers and regulators, the consumers and contributors (Kaplan and Norton, 1992). Those stakeholders often generate some competing interests and goal ambiguity (Burgess and Wilson, 1996) and affect the internal decision-making processes.

Having to break a climate of ambiguity intensifies the healthcare managers' need for information (Niven, 2005). In order to express their strategy into operational terms that can instantly induce the required change and adjust it to the internal and external evolutions, healthcare managers tend then to evolve their traditional MCSs (Kaplan and Norton, 2006), notably to find a balance between the external mutations and the internal organizational climate (WHO, 2000).

An alignment between all these competing forces may provide them with the necessary impulse for containing costs (Adler et al, 2003) and increasing the potential revenues. But such an organizational innovation can be a source of conflicts between the administrative staff and the medical personnel (Djellal, 2004). Mainly in this type of institution, delegating "power" is another matter of agreed priorities and goal congruence between stakeholders, and/or *"humanistic"* individual versus group perceptions (Burgelman, 2002). Though, the adoption of an organizational structure that assigns delegations can promote the implementation of a contemporary PMS (Djellal, 2004).

Proposal d: In healthcare organizations, a formal structure sustains the promotion of the traditional management tools in order to favor the evaluation of skills and the motivation of stuff.

Consistent with the specificity of each situation, every administrator's profile reveals traditionally his leadership style and competencies as regards to the adoption of an organizational structure that can create a fit

and generate an internal climate of communication and coordination. Motivated by the player's pressure and their "own wish to do the right things", some administrators emphasize the adoption of the PMS (Kaplan and Norton, 2006).

Proposal e: The healthcare administrator's profile and perception of uncertainty reveal his decision-making style and sustain his choice of a PMS.

Healthcare organizations represent then complex systems that interact with several players. Every involved player has his role and his own influence on the organizational management and performance. Compliant with his position within this system, he is managerially influenced by his culture, his intents and strategies, his responsiveness and the resources that he uses or controls. Hence, if any evolution affects one of these four axes, it shapes the others and it modifies the player's interaction and behavior within his environment (Hubinon, 1998). Being at the heart of healthcare organizations, people play then multiple roles that shape the organizational attributes.

However, specific research to date does not illustrate clearly the role of those numerous constituencies. While some research studies deal with healthcare performance in terms of choice and implementation of some indicators (El-Jardali, et al., 2011), scientific studies that clearly associate the role of people, the organizational contexts, the managerial decision-making process and the choice of a specific PMS does not exist in the literature specialized in this field (a theoretical model, illustrated in Figure 1, elaborated by Rouhana and Van Caillie, 2011). So, in this paper we suggest to go beyond a traditional analysis, and we analyze these institutions as complex systems, accountant for several constituencies who do not often agree together.

Sample and methodology

Our first sample is carried out through a semi-structured questionnaire, adapted from an international scientific survey "The Balanced ScoreCard in HealthCare: an international survey"[1]. We have addressed the Belgian healthcare administrators. After four recalls, we have received the approval of 12 respondents, willing to participate in our in-depth case studies. Our meetings were held with the general and/or the financial managers. The length of the meetings varied between twenty minutes and one hour. However, we were not able to

1 As a researcher, we are affiliated to an international project collecting data out of 20 countries, initiated since 2007 by the Professor Strefano Baraldi from the "Centro di Ricerche e Studi in Management Sanitario", at the Catholic University of Milan, Italy and the C.E.P.E. Research Center, University of Liege, Belgium. We were responsible of collecting data from Belgium and Lebanon.

generalize our findings based on this sample (Suddaby, 2006). For this reason, we have conducted a similar collecting method in Lebanon: a second sample of additional 10 respondents to "modestly" generalize our findings and to suggest a "parallel" analysis in two heterogeneous environments.

Since the core issues of our research are to identify the role and influence of the some actors on the choice of a PMS, it depends on an interpretative paradigm that can explain "situations and behaviors from an individual's point of view". Therefore, we privilege the qualitative methodology through a multiple case study comparison to understand the emergent similarities and differences (Yin, 2003). Data analyses were provided by the TOSMANA Software for qualitative research and in particular case studies.

Results and discussions

We precede our main discussion by an analysis of the main characteristics of the two heterogeneous healthcare contexts that we consider:

- In Belgium, the responsibility for elaborating the healthcare regulations is in the hands of the Communities (Flemish and French) that exhibit some divergence in their respective cultures, languages and locations. From a patient perspective, the Belgian system offers a very high quality of care and technology, a freedom of providers' choice, a timely responsiveness and a total coverage of the costs incurred. At the entity level, organizations can be distinguished by their size and level of expertise. However, they do tackle some competitive constraints that manipulate their strategic positioning related to (a) the public/private statuses; (b) locations, types of services, health policies, etc. (WHO, 2000) and (c) patients' perception. Given these common challenges, Belgian hospitals have to integrate the patients' medical records, to justify in details all the costs, to estimate their budgets and are required to improve continuously the quality and safety of services. They respond to the different reform policies and consider preserving their organizational positioning. Motivated by some external financial initiatives, they reconsider the promotion of the traditional MCS.
- The Lebanese healthcare sector stands for a highly fragmented system. Despite the presence of a high level of technology and many qualified private practitioners, this sector combines several governmental, not-for-profit and private for-profit financing methods. This is explained by the absence of the public involvement. Therefore, the role of the NGOs and private hospitals is extremely important.

Indeed, the lack of control and supervision has induced progressively the concept of privatization and governmental private contracts, considering that public hospitals are non-compliant with the market principles. In the mid-nineties, the government elaborated a first reform plan, assisted by a World Bank loan. However, under political pressure, this plan was inefficient and was replaced by an accreditation system that emphasizes the allocation of budgets (Jardali, 2007). Hence, this evolution has sustained the promotion of the traditional MCS within healthcare. To meet the accreditation standards, the Lebanese hospitals promote their internal policies and their managerial tools to preserve their public arrangements and their main sources of funds (Ammar, et al. 2013).

In both sectors, the multiple tasks that are kept in the hands of every HCO illustrate its perceived ability to attract significant resources and to handle the multiple environmental constraints. Adapting its internal climate, structure and level of technology to these elements becomes then a fundamental concern as it can initiate a strategy-focused organization.

To present the results of our case studies, we now use three summary tables, that compare (both across and within) the two healthcare contexts with four complementary perspectives: the ownership perspective (public/private; network membership), the role of stakeholders (authorities, administrators and personnel), the organizational attributes (size, life-cycle, structure and technological platform in use) and the adopted management tools (MCS/ MAS or PMS). We present our results from purely university hospitals (Table 1), from general university hospitals (Table 2) and then from general hospitals (Table 3).

- *Case studies in university hospitals (U1 and U2):* Table 1 compares the role of the healthcare player's in two university hospitals. In both cases, authorities and administrators are committed to promote the traditional tools. However, the personnel's perception had restricted or sustained the implementation process, in some departments.

- *Case studies in general/ university hospitals (GU):* out of Table 2, we were able to conclude that in six Belgian cases the government's intervention in the healthcare management is increasing the pressure on most healthcare authorities, who are concerned with their strategic positioning and image or perception. Accordingly, healthcare authorities have shaped the organizational life-cycle, size (number of beds) and stage of development by elaborating network arrangements that emphasize specialization. However, they are concerned with their buildings' renovation more than committed to efficient management tasks. Healthcare administrators adopt then formal structures to associate the operational level with the

support activities relying on their managerial profiles. They require the collaboration of the medical staff to develop further complex MIS. But, they are restrained by some lack of financial resources and by medical professionals who compete to preserve their independent status.

On the other hand, we highlight the authorities' private ownership and the weakened interventions by the government in four general/university Lebanese hospitals. In fact, the private ownership dominance guarantees the availability of resources, the excellence of research, teaching and training for the medical specialists and the high level of care quality. The healthcare administrators are granted then with some extent of autonomy, but have to highlight their managerial competencies. Hence, they develop several support departments to promote the accountability, transparency and compliance with the accreditation standards.

- *Case studies in general hospitals (G):* out of Table 3, we illustrate that in five Belgian cases, the authorities (private and/or public) are rearranging their institutions in network memberships, designed to centralize the support administrative activities and to create poles of references for technical activities. However, their organizational goals are not achieved yet. In many cases, the relocation, the renovation of buildings and the innovation of new technical equipments are delaying the managerial processes. Healthcare administrators are then using dissimilar and diverse tools to manage departments, to justify costs and to monitor the quality of care. But, this new vision of centralization increases the pressure on the medical personnel.

  As for five Lebanese general hospitals, the private medical or religious ownerships and the international partnerships are dominant. The private ownership has emphasized the adoption of innovative MCSs to reflect the overall healthcare performance in terms of quality and safety. Healthcare managers are granted by some extent of autonomy. They are required to increase the demand and attract further customers to make use of the available medical equipments.

Conclusion, limitations and future research

Monitoring the hospital's performance is evolving over time in search of more efficiency by integrating additional levels of care, reducing costs and keeping stuff up-to-date. To fulfil these three potentially divergent aspects and to monitor performance, healthcare administrators are using dissimilar MCSs. In Table 4, we suggest a summary of our hypotheses and main findings.

At the industry level, our results highlight the role of the government as an owner, regulator and supervisors of healthcare resources. To favor patient safety, they promote the use of the traditional tools when impulsing a PMS. From a patient perspective, Belgian patients benefit from a free choice of provider, a full access and a very high quality/safety of care, while the Lebanese patients depend on their social status to access care in a private dominant sector.

In both sectors, the healthcare authorities remain an essential key player affecting the resources, the life-cycle and size, the structure and stage of development and the managerial decision-making process within each hospital. They are influenced by the social and political factors that consider the Board as being responsible for responding and implementing the public policies. This fact induces competing interests and goal ambiguity between the boards' members (communities and public associations).

Healthcare administrators embark then upon divergent extents of autonomy. They need to rely on their leadership style and managerial processes (profile, competencies and perception of uncertainty) to promote their traditional tools. However, they need to be aware that their decision-making can sometimes be restrained by: (a) the healthcare national contexts (elaboration of rules and regulations); (b) the authorities' commitment, consent and ownership; (c) the medical personnel's behaviors impeding innovation; and (d) the availability of resources.

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TABLES

Cases	Organization's attributes	Healthcare Players			MS
		Authorities	Administrators	Personnel	
U1	-Belgian sector -Public ownership -Member of a network -652 beds -Critical crossroads -Formal structure -Complex IT platform	-Committed (mission and innovation) -Major influence on the attributes of the organization -Elaboration of rules and procedures relative to the national (international) requirements	-Administrative profile -Somehow autonomous -Committed (innovation, personnel development, structure, strategy)	-Accredited -Administrative stuff -Internal climate restricted in some medical fields	PMS
U2	-Lebanese sector -Private ownership -Independent -400 beds -Critical crossroads -Formal structure -Complex IT platform			-Executive training -Administrative stuff -Internal climate of communication and coordination	

Table 1. Qualitative comparison: two case studies in university hospitals.

Cases general-university hospitals	Sector Ownership Network	Organisation's attributes			Healthcare Play			
		Size	Life-cycle	Structure	IT platform	Authorities	Administrators	
GU1	Belgium Public Member	362	Crossroads	Formal	Basic	Admission	Administrative Autonomous	
GU2	Belgium Public	317	Recently inaugurated	Formal	Complex	Committed to an image of perception	Administrative Autonomous	
GU3	Belgium Public Member	929	Crossroads	Formal	Complex	Committed to an image of	Administrative	

						clientele		
GU4	Belgium Public Member	296	Crossroads	Formal	Basic	Committed to quality	Administrative Autonomous	
GU5	Belgium Private	518	Crossroads	Formal	Complex	Committed towards patients' rights	Other Autonomous	
GU6	Belgium Public	96	Association	Formal	Complex	Committed to an image of perception	Administrative	
GU7	Lebanon Private Member	430	Crossroads	Formal	Basic	Committed to an image of perception	Administrative Autonomous	
	Lebanon Private Member	220	Crossroads	Formal	Basic	Committed to an image of perception	Other (Medical) Autonomous	
GU8	Lebanon Public	544	Recently inaugurated	Formal	Complex	Committed to an	Administrative	

						image of reference		
GU9	Lebanon Private	210	Crossroads	Formal	Complex	Committed to an image of reference	Administrative Autonomous	

Table 2. Qualitative comparison: ten case studies in general/university hospitals.

Cases in general hospitals	Sector Ownership Network	Organization's attributes				Healthcare Pl	
		Size	Life-cycle	Structure	IT platform	Authorities	Administrat
G1	Belgium Private Member	302	Crossroads	Formal	Complex	Image of Reference Lack of commitment	Administrative
G2	Belgium Public Member	55	Crossroads	Formal	Complex	Commitment Reengineering	Administrative Autonomous
G3	Belgium Private Member	148	Crossroads	Formal	Complex	Commitment Near the Patient	Administrative
G4	Belgium Public Member	456	Crossroads	Formal	Lack	Quality and Ethics Lack of commitment	Administrative
G5	Belgium Private Member	276	Crossroads	Formal	Basic	Commitment High quality	Administrative
G6	Lebanon Private	200	Recently inaugurated	Formal	Complex	Excellent care to all Evolution of rules and procedures	Other (IT)
G7	Lebanon Private	106	Recently inaugurated	Formal	Complex	Commitment A global team to heal	Administrative Somehow autonomous
G8	Lebanon Private	160	Crossroads	Formal	Complex	Confidence Evolution of rules and procedures	Other (Medical) Autonomous
G9	Lebanon Private	300	Crossroads	Formal	Complex	Image of Reference Evolution of rules and procedures	Administrative Autonomous
G10	Lebanon Private	70	Maturity	Formal	Basic	Quality Lack of commitment	Other (Medical) Autonomous

Table 3. Qualitative comparison: ten case studies in general hospitals.

The role of the healthcare players: Sample: 22 case studies; Methodology: qualitative approach.	
Contingent variables and hypotheses	**Findings**

1) The role of the governments (Proposal a)	- National context - Laws and regulations - Patients' protection - Political influence - Private dominance (profit)
2) The role of the patients (Proposal b)	- Patient's rights (access) - Value: safety/quality/cost - Diversification - Perception
3) The role of the healthcare authorities (Proposal c)	- Resources: private vs. public - Commitment/ Consent - Renovation vs. Recently inaugurated - Size/Life-cycle/ Stage of development - Level of technology
4) The role of the healthcare personnel (Proposal d)	- Social status - Behaviors - Professionalism - Resistance to innovation
5) The role of the healthcare administrators (Proposal e)	- Profile and leadership style - Autonomy/ Perception - Competencies: management of information, policy elaboration - Motivation/ Informative role

Table 4. Qualitative approach: summary table of our hypotheses and findings.

ILLUSTRATIONS

Figure 1. A contingent model illustrating the relationship between multiple healthcare stakeholders and their choice of a contemporary performance monitoring system.

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