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## Performance management in university hospitals: an empirical analysis in a Brazilian institution

### Avaliação de desempenho em hospitais universitários: uma análise empírica em uma instituição brasileira

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#### Abstract

This study analyzed how performance management takes place in a teaching hospital located in the south of Brazil. A case study comprising several data collection techniques – including interviews, document research, and participant observation – was conducted with the aim of understanding the processes involved in performance management in the institution, and the meanings attributed to the phenomenon. Findings indicate the absence of alignment between strategy, performance management and decision-making, as well as inadequacies of the artifact and the reward system. These results have motivated reflections on the alignment between the institution's strategic plan, its performance management system, and the relationship between decision-making and strategy. The study may provide important information to similar institutions regarding the implementation of performance management systems, and the elaboration of propositions by accounting researchers.

**Keywords:** Management control, performance management, teaching hospitals.

#### Resumo

A investigação analisou como ocorre a avaliação de desempenho em um hospital universitário localizado no sul do Brasil. Realizou-se um estudo de caso composto por diversas técnicas de coleta de dados - entrevistas, pesquisa documental e observação participante - com o objetivo de compreender os processos envolvidos na avaliação do desempenho na instituição e os significados atribuídos ao fenômeno. Os achados indicam ausência de alinhamento entre estratégia, avaliação de desempenho e tomada de decisão, além de inadequações do artefato e do sistema de recompensas. Tais resultados motivaram reflexões sobre o alinhamento entre o planejamento estratégico da instituição e o seu sistema de avaliação de desempenho e o relacionamento entre tomada de decisão e a estratégia. O estudo pode fornecer informações importantes a entidades semelhantes sobre a implementação de sistemas de avaliação de desempenho, bem como para a elaboração de proposições por pesquisadores de contabilidade.

**Palavras-chave:** Controle gerencial, avaliação de desempenho, hospitais universitários.

#### 1. Introduction

Performance management systems – as management control artifacts recommended for the implementation of strategies and improvement of organizational performance (Franco-Santos, Lucianetti & Bourne, 2012) – need to be integrated to the institutional field where their implementation occurs. This leads to the need for evaluating the most adequate model available, having in mind contextual and cultural factors permeating the organizational environment (Rocha & Guerreiro, 2010). Without such evaluation, a number of risks (such as disconnection between occurrence efforts and strategy, prioritization of strategic actions, and management confusion) may emerge (Kaplan, 2009).

Among the institutions that have specific characteristics which must be reflected in the choice of performance management artifacts with the best compatibility with its activities and strategy, are organizations comprising the hospital sector (Evans, Hwang & Nagarajan, 2001) – especially nonprofit ones, such as public institutions (Eldenburg & Krishnan, 2007). In these organizations, the importance of indicators resides mainly in surveying the effectiveness of the actions that are promoted within a certain population (Propper & Wilson, 2003).

There are several characteristics that impose challenges to the development and implementation of managing control artifacts in health care institutions. These include: (i) the complexity and

interdependence of the main processes and the organizational structure; (ii) the control of process by dominant professionals; (iii) the frequent conflicts regarding objectives among different stakeholders; (iv) the highly regulated environment in which these organizations operate; (v) the multiplicity of clients and their distinctive characteristics; (iv) the need for highly trained professionals; (vii) the specificity of the services offered; (viii) the need for keeping the therapeutic decision-making environment intact; and (ix) the constant rationing of financial resources destined to the sector in face of technological enhancements (Ribeiro Filho, 2005; Abernethy, Chua, Grafton & Mahama, 2007; Gapenski, 2007).

When dealing with teaching hospitals, such complexity in the adoption of managing control practices is aggravated, since these institutions are responsible for providing teaching, research, and continuing education activities in the health care field. Furthermore, they should be references in terms of medium- and high-complexity procedures and cutting-edge technology, at the same time as they must maintain the quality of clinical attention to patients (Bonacim & Araújo, 2011).

Therefore, it is important to understand how organizational performance management is carried out in these institutions, especially when exploring the reactions that several specificities might cause in the adoption of such practices. Moreover, it is also relevant to evaluate the compatibility between the adopted tool



and the strategy defined by the organization. The purpose of the present article is thus to describe how strategic performance management is done by a teaching university hospital in the south of Brazil. The research is guided by the following question: how is performance management carried out in a teaching hospital in the light of its strategic management?

The motivation for this research was initially based on the importance that the hospital sector has in a nation's economy. This sector utilizes a considerable amount of public resources, has a continuous increase in prices of procedures and medications, and faces constant population aging (Aidemark, 2001; Abernethy et al., 2007; Bonacim & Araujo, 2011).

Thus, the undertaking of a case study in an institution presenting these characteristics may be useful for providing practical subsidies for its adoption in similar institutions (Otley, 2008), especially when dealing with research involving managing account systems and strategy (Langfield-Smith, 2005). It becomes relevant to add the results of such investigations to the academic literature, due to the incipient development of managing control tools in Brazilian hospitals, and performance management tools in Federal Brazilian teaching hospitals, more specifically. Furthermore, there is a current lack of academic research that deals with management control in Brazilian public organizations.

## 2. Theoretical-empirical references

When dealing with hospital institutions, Ribeiro Filho (2005) asserts that the congruence of objectives is essential to the good management practices of these institutions. This becomes a particular challenge because of the performance of several professional corporations, which have different degrees of autonomy and often present conflicting interests and priorities, which in turn may impact the decision-making process related to the allocation of budgetary and financial resources.

Souza et al. (2009) understand that the assessment of organizational performance in hospital institutions is crucial to achieve the goals of health care assistance actions to society. His analysis is fundamental for the decision-making of hospital administrators regarding the efficiency, efficacy, and effectiveness of the services offered.

Other authors emphasize the importance of strategic systems of performance management for these organizations, especially regarding the possibility of the presence of non-financial indicators that better subsidize decision-making from a clinical point of view (Aidemark, 2001), as well as the possibility to balance the interests of various stakeholders in those institutions (Kollberg & Elg, 2011).

In contrast, Ribeiro Filho (2005) considers that the implementation of several indicators, organized in scorecard format, can be problematic in hospital institutions, especially when the following situations are taken into account: (i) lack of a common denominator for placement of the indicators under the same basic comparison; and (ii) difficulty to establish the most relevant set of indicators for the comparability of performance. With this, the author advocates the use of a single indicator that

allows for simplicity in the interpretation and comparability of hospital processes.

It is worth mentioning Bisbe and Barrubés's (2012) claim that it is necessary to bear in mind that adaptations of existing models are essential to the reality of hospital institutions. The same understanding was reached by Bresser-Pereira and Spink (1998), when dealing with the adaptation of artifacts originating from the private sector to the public segment. This can be evidenced, for instance, in the proposal made by Gauld et al. (2011), which was inspired by the Balanced Scorecard model for the healthcare system in New Zealand, but adopted the following perspectives: healthy lives, quality, access and efficiency.

In the Brazilian context, the movement for the implementation of such practices in hospital organizations has amongst its main drivers the hospital accreditation process (Schiesari & Kisil, 2003). When dealing with public organizations, more specifically, the Nova Administração Pública (New Public Management) movement stands out by seeking new management and organization models for public management and adopting practices based on the advances presented in the private sector (Propper & Wilson, 2003).

In spite of being considered important within this context (Van Helden, Johnsen & Vakkuri, 2012), performance management has been adopted at a slow pace in public organizations (Niven, 2003), as it is usually employed under pressure from hierarchically superior authorities or agencies (Rantanen, Kulmala, Lönnqvist & Kujansivu, 2007). Niven (2003) also clarifies that insecurities when experiencing the implementation of artifacts originating from the private sector, in addition to concerns regarding the possibility of deviation from the true driving mission of the institution, might help to explain such situation.

As a consequence, some factors require special attention and add complexity in building performance management systems in these institutions. Rantanen et al. (2007) group the problems caused by the diversity of stakeholders in the public sector into two main situations: (i) taking into consideration all of the parts concerned at the time of defining the performance measures resulting in a set of measures that do not satisfy the needs of any of the interested parties; and (ii) a special difficulty in establishing goals or making decisions based on performance measures, due to the existence of conflicting interests. The same authors argue that the implementation of a performance management system can and should consider these particularities in order to be able to reconcile multiple interests.

## 3. Methodology

For the purpose of this research, a single case study was carried out (Yin, 2001) at a federal university hospital located in Southern Brazil. A case study was chosen as suitable to answer the research question proposed due to the need to collect descriptive data and the concern with the processes and the meanings attributed to the phenomenon, which can be reached through a qualitative approach (Martins & Theóphilo, 2007). Qualitative research involves the use and collection of empirical materials that can describe the meanings attributed by individuals involved



in research (Denzin & Lincoln, 2006). The completion of the present case study involved several data collection techniques, including interviews, document research, and participant observation. Information obtained from the analysis of documents (Yin, 2001), from observations, and from analysis of the interviews (Bardin, 2004) allowed for data triangulation in the construction of converging lines of inquiry (Yin, 2001). The choice of the institution was motivated by two factors: (i) the fact that it is considered a decisive case – i.e., it has the necessary conditions to test the theory discussed in the research problem (Yin, 2001); and (ii) the presence of one of the researchers as an employee of the institution, which enabled participant observation as a data triangulation element.

A case study protocol was elaborated for conducting methodological procedures. It contained the processes and general rules that must be followed when using the case study, a tactic that aims at increasing the reliability of the survey (Yin, 2001). Still, in regards to the research tools, semi-structured interview scripts, aimed to guide the interviews, were devised, while maintaining margins for the answers of the interviewees.

With regard to the document research, the following documents were obtained from the institution: (i) strategic plan; (ii) hierarchic structure; and (iii) documents related to the performance management artifact used by the organization. These documents were submitted to analysis and served as input to the following procedures.

To carry out the semi-structured interviews, the entire population of directors, advisors, managers, and those in charge of similar areas in the institution were taken into account with two scripts being elaborated: a specific script for interviewing General Management, and another script for the interviews with other managers. Both scripts were comprised of three sections, and the script for the interview with the General Manager was comprised of a greater number of questions and preceded by the validation of the hierarchical structure. The sections were as follows: (i) the relationship between strategy and decision-making; (ii) the existence of performance indicators; and (iii) the existence of goals. In order to develop the questions for each of the three sections, the sources presented in the theoretical-empirical framework of this article, in addition to specific sources on the topics covered in the blocks, were consulted.

The number of managers interviewed was reached by the analysis of the hierarchical structure of the institution and with the conclusion of the interview with the General Manager, which helped to determine the relevant areas in terms of processes and costs. These criteria were used as a factor in determining the scope of the survey.

As a result, 33 interviews were conducted in March and April of 2013, taking into account the population of 34 mapped managers. The interview with the General Manager lasted 1h23min, and the interviews with other managers totaled approximately 10 hours, with an average duration of 19 minutes. At the time of the interviews, it was verified that managers had been occupying their current positions for 3 years and 5 months, on average, and had been working for the institution, on average,

for 22 and a half years. Such facts confer greater reliability to the results obtained.

The analysis of the open questions in these interviews was done through the use of the Sphinx Survey<sup>®</sup>, Lexical Edition application, version 5.1.0.7, which assists in content analysis, through categorical analysis procedure. Microsoft Excel<sup>®</sup> was used in order to import the data from the interviews into that research tool.

It should be noted that this research followed the necessary ethical procedures, which are embodied in the approval of the research project by the Research Ethics Committee of the institution under investigation, as well as in the signing of a Term of Free and Informed Consent by research subjects recruited, prior to data collection.

#### **4. Analysis and reflection on the reality studied**

Based on the case study protocol elaborated for this research, the necessary procedures were conducted to achieve the delimited goals, and the research question presented was unfolded into the following case study questions to perform this diagnosis: (a) what is the mission, vision, and strategic goals of the institution under analysis? (b) is the artifact for performance management aligned with the institution's strategy? (c) does the artifact for performance management cover all the relevant areas in terms of the institution's processes and costs? (d) is the decision-making process carried out in the institution taking into account the strategy that has been defined?

##### **4.1 Strategic plan**

The strategic plan, set for the 2012-2015 period, started being developed in the second half of 2011, with the participation of the business professors from the educational institution to which the hospital is linked. In this process, the institution's mission and vision were updated, and the values, strategic goals and strategic map were defined for the delimited period of time.

In regards to the first question (a), it is noteworthy that the mission defined by the institution investigated in this study is a reference in terms of the training of health professionals, the attention to health care, technological innovation, and sustainability. providing care with insertion and integration in the healthcare network and the needs of the population. The vision defined by the institution, in its turn, is that it should be the premier public teaching hospital and healthcare complex in the country, accredited with excellence at all levels of assistance. In addition, the document presents six strategic goals for the period, and also eighteen goals elaborated in a strategic map based on the Balanced Scorecard model.

##### **4.2 Alignment between management contracts and strategy**

In order to answer case study question (b), the performance management artifact used by the organization being studied here was first identified. This took place during the interview with the General Manager. The question which was elaborated to this end led to the identification of management contracts as the tool used for organizational performance management. This tool, comprised of indicators and goals, is materialized through pacts



made individually between the General Manager and the management units, which culminates in a document comprising institutional indicators (which are applicable to all units) and specific indicators, with the Management Units Implementation Group – which is a group formed by employees of the management units, being in charge of their management and monitoring.

According to the General Manager, the goals in these contracts are established each semester, and the main determining factors for their implementation are the following: (i) experiences observed in two similar institutions; (ii) opinion/recommendation by managers from one of these similar institutions; (iii) a decision by the directing and managing corps; (iv) the reading of books on the subject; (v) the hospital accreditation process.

At the time of the survey, 20 copies of management contracts were obtained, corresponding to the entirety of the current contracts in the institution. The contracts present three coexisting terms. Fourteen of them were current between July 2011 and June 2013; six were current from January 2012 to June 2013; and two were current between July 2012 to June 2014. Taking this feature into account, and comparing it to the completion period of the current strategic plan, it is not possible

to state, for temporal reasons, that the management contracts are aligned with the strategy that has been defined.

Another relevant factor that has been observed refers to the questioning of how the strategy is communicated to the institution's employees, according to the script of the interview. According to the General Manager, the internal journals, the internal documents that are issued to regulate activities, the internet website, and collective meetings are considered strategic means of communication, while management contracts are not listed in this sense. For this reason, the question is raised whether they were also intended to serve that purpose when they were elaborated and applied.

In the script for semi-structured interviews, which were elaborated for the other managers, one of the questions sought to determine how the process of defining performance indicators took place in the areas that were covered in the interview. Based on the answers collected from the 18 managers that stated they had performance indicators in their areas, a category analysis was performed revealing two greater answer groups: "based on" and "by whom." The main results that were obtained in the category analysis are presented in Table 1.

**Table 1 - Category analysis – indicator elaboration process**

Group	Category	Quantity
Based on	Needs of the area	11
	Weaknesses of the area	3
	Legislation; Programs by the federal government; Risk analysis; Demands from General Manager; Demands from Area Management; Information from Planning Section; Strategic planning; Needs of the patient; Indicators of Assistance Direction; Risk surveying; Management Model; Institution needs; Suggestions from the staff	1
By whom	Internal collegiate	8
	Unit managers	4
	Unit supervisors; Management units deployment staff	3
	Service chiefs; Unit collaborators; Hospital board	2
	Unit managers; Unit employees; General Manager	1

The results of the category analysis also revealed that "area needs" were mentioned by 61% of the respondents, followed by "area weaknesses," which was mentioned by 16% of the respondents. "Strategic planning," in its turn, was mentioned by a single respondent.

Findings obtained with this question are contrasted with those from another question present in the script, which sought to identify, among the individuals interviewed, by way of a Likert scale, the degree at which they thought the indicators had been formulated in such a manner as to promote a direct connection with the organization's strategy. The result that was obtained

(median 4), which expresses that managers think that there is a connection between the indicators and the strategy – even though it might be partial – is shown to be contradictory in face of the evidence obtained in the previously mentioned question.

With regard to the goal definition process, information was also obtained based on the resolution of an open question to the other managers in the organization, which was also submitted to category analysis. Similarly to the previous question, the analysis resulted in two greater groups: "based on" and "by whom." The results are presented in Table 2.

**Table 2 - Category analysis – goal elaboration process**

Group	Category	Quantity
Based on	Needs of the area	7
	Weaknesses of the area	3
	Strategic plan; Indicators	2
	Management Model; Risk analysis; Literature; Institution needs; Production; Suggestions from the staff	1
By whom	Internal collegiate	13
	General Manager; Unit managers; Management units deployment staff	3
	Hospital board; Area collaborators; Area supervisors	2
	Unit managers; Needs of projects; Unit services	1





It was noticed that, in the analysis that was carried out, only two units mentioned “strategic plan” as the basis of the goal definition process in the unit, similar to what occurred in the indicator elaboration process. In addition, six unit managers emphasized that the goal definition process occurred in the same way as the indicators and, as it has been pointed in regards to indicators, the majority of goal definitions occurred internally in the units.

The result obtained in scalar questions applied to other managers should be added to this evidence that reveals that, from the point of view of managers that stated that they had goals to achieve, the goals involve the main activities performed by the unit (median 5). Moreover, their answers show that the existing goals are directly connected to the strategy defined by the organization (median 5), but this is in contradiction with the result obtained in the open question.

Thus, taking into account the temporal incongruity between the current strategic plan and the current management contracts, the lack of knowledge about the performance management tool as an element of strategy communication to the organization’s employees, and the prevalence of needs and weaknesses of the area in the elaboration process of indicators and goals – which in their majority were elaborated by members that were internal to the units – it is not possible to state that the institution’s performance management artifact is aligned with the organization’s current strategy.

#### 4.3 The scope of the performance management system

In the case studied, it was observed that due to the specificity of several specialties present in a hospital with medium to high complexity, the hierarchical structure is wide, starting from area management, especially in regards to assistance. Hierarchically below management, the basic structure is generally made up of units or coordinations, followed by services, which in turn, involve sections.

Thus, having the documented hierarchical structure, the validation of the hierarchy that was performed with the General Manager, and the delimitation established for this study as basis, 34 relevant areas were identified in terms of processes and costs in the institution: General Manager, six area managements, four advisory sections, and twenty-three management units or similar structures.

An examination of the current scope of the organization’s management contract tool reveals that this artifact does not include all relevant areas in terms of processes and costs in the institution, and that it does not contemplate area management, advisory sections, and structures similar to units and other structures. This contradiction is also present in the answer obtained for one of the questions to the General Manager, which inquired the manager whether performance management is carried at several hierarchical levels in the organization, which in turn provided a positive answer.

Hence, in regards to question (c), it appears that the formal tool for performance management does not involve all relevant areas in terms of the organization’s processes and costs, and neither

does it involve the several hierarchical levels in the institution – even if the answer obtained in the interview with General Manager indicated otherwise.

#### 4.4 Decision-making and strategy

In order to answer research question (d), the analysis of the institution’s strategic plan and the results obtained in the interviews done with the organization’s managers were considered.

According to the managers, who mentioned the existence of performance indicators in their areas, such metrics are used partially as basis for their decision-making process (median 4). As to the features of the indicators that are used, it was noticed that, from the point of view of the managers interviewed, the existing indicators partially cover the needs of measuring efficiency (median 4), efficacy (median 4), and effectiveness (median 4) of the actions promoted by their areas.

When asked (through an open question) which indicators are considered of greatest importance for their decision-making process, emphasis was given to non-financial indicators (of a total of 76 indicators mentioned, 89.5% were non-financial ones). When these answers were contrasted to the indicators actually present in management contracts, it was observed that 61.2% of the indicators mentioned in the interviews are not found in the tool used for performance management by the institution.

Therefore, if existing indicators are used as basis for the unit’s decision-making process, and if it is taken into account that units consider other indicators that are not included in the management contracts as the main ones for decision-making, it is correct to state that management contracts are considered an instrument used partially as support in the decision-making process.

However, by viewing such situation from another angle, it was observed that management contracts assume distinct importance in the decision-making process by managers in the units analyzed. While 33.3% of the interviewees mentioned only indicators that are present in the management contract, another 33.3% did not mention any indicator present in the management contract. In addition, 22.2% of the interviewees took into account both indicators present in the management contract and indicators that are not present in the document, and 11.1% stated that no indicator is satisfactorily used in decision-making.

Thus, it is possible to infer that the indicators might be used as basis for decision-making by the majority of managers, but such indicators are used in a distinct manner throughout management units. Also, it should be made clear that not only the areas that are currently under management contracts use performance indicators, as the results of the survey have shown (22 of the 33 areas use them, and four do not have management contracts).

In regards to the existence of goals to achieve, it was observed that, in addition to the 19 areas that were interviewed which have goals in their management contracts, 12 other managers stated that their areas have goals to achieve. Considering the existence of areas that have goals to achieve independently of the performance management system, it is necessary to



aggregate the information regarding the process of establishing goals in these areas to those already presented in Table 2, so as to present an overall picture. Such results are shown in Table 3.

**Table 3 - Category analysis – goal elaboration process – general**

Group	Category	Quantity
Based on	Needs of the area	8
	Strategic planning	6
	Weaknesses of the area	3
	Indicators; Management model	2
	Risk analysis; Management contracts; Legislation; Literature; Needs of the institution; Improvement opportunities; Production; Suggestions from the staff	1
By whom	Internal collegiate	15
	General Manager	8
	Hospital board; Unit managers	4
	Management units deployment staff; Area collaborators	3
	Area supervisors	2
	Unit managers; Quality management advisory board; Needs of projects; Unit employees	1

The existence of goals is a factor that aims at influencing the decision-making process of the collaborators in an organization. Assuming a first line of thought, if the process of establishing goals does not consider the strategic plan as its main basis, but rather the area's needs, and if they are defined mostly by members from the area itself, it is not possible to confirm whether there is a connection between the decision-making process driven by the established goals and the organization's strategy. In addition, the analysis might indicate that the management contracts have not contributed satisfactorily to promote such connection between goals and strategy.

By viewing this scenario from another angle, one assumes that the established goals are directly connected to existing indicators, and that the indicators are used as basis of the decision-making process by the managers. However, as one can notice from the information obtained and compiled in Table 3, the conclusions shown in item 4.2, and the information presented in this section on the areas that have indicators independently of the existence of current management contracts, it is not possible to verify that the existing indicators are directly connected to the organization's strategy.

With this, one may reach the following conclusion: if the goals have a role in influencing managers' decision-making, and the goals are connected to the indicators, and if the indicators are used as basis for the decision-making process, and the indicators do not present an evident connection with the organization's strategy, it is not possible to infer that the decision-making process is carried out based on the organization's strategy.

In an interview with the General Manager, the existence was observed of a reward system linked to the achievement of goals defined in the management contract. In this system, financial resources in equal amounts for all areas are made available for the purchase of permanent materials, proportionally to the achievement of the goals that had been defined via management contracts by the units. Regarding the adequacy of the current

reward system, the General Management itself considers it inadequate in promoting the desired actions, considering that the granting of individual rewards or other forms of gratification might be more effective. However, budgetary restrictions and management of public institutions limit the promoting of other types of compensation.

This view of inadequacy is corroborated by the other managers, who have expressed their answers in reply to the scalar question regarding this subject (median 2). It was asked, through an open question, which were the reasons for such inadequacy, and the most cited ones were: (i) not receiving incentives for goals that have already been achieved; and (ii) the insufficient amount of resources destined to this end. Also, according to these managers, some alternatives would be better than the current model: (i) the granting of individual compensations; (ii) rewarding through training courses or in cash; and (iii) rewarding through motivational courses or furloughs.

Therefore, in view of the evidence obtained through the procedures adopted, it is understood that it is not possible to state that the decision-making process at the institution investigated here is carried out based on the organization's strategy.

## 5. Conclusions

In the present study, it was observed that management contracts do not involve the different hierarchical levels of the institution under study or all the areas deemed relevant in terms of processes and costs. For areas that are currently under these contracts, it was observed that the contracts are not viewed by management as a tool for the communication of the institution's strategy throughout the organization. The lack of integration between contracts and such strategy is reinforced by the fact that the indicators and goals comprising them are formulated mainly by the area itself which is being evaluated. Thus, the contracts are based on the needs and weaknesses of this area, and the provisions of the strategic plan are pushed to the background during this elaboration process.

Considering that the current indicators in the units are used as a partial basis for the decision-making process, it can be understood that, by not being connected to the strategy and being elaborated by the members of the areas themselves based on internal needs, the current indicators may be leading managers to prioritize elements that are not congruent with the strategy adopted by the organization. This factor might be reinforced by the existence of incentives connected to the achievement of the goals established by the management contracts (even if such rewards are considered inadequate by the managers that have been interviewed).

In this situation, the lack of congruency among management contracts and the institution's strategy might increase the risk of fostering a decision-making process by managers that might not add to what is being desired by the organization as a whole – i.e., what is stated in its strategic plan – thus making its implementation difficult.



Therefore, it is suggested that the institution under analysis here reassess the way in which the management contract tool is being used, as well as its role in the implementation of the current strategy. The institution should also reevaluate whether this tool is really able to fulfill this purpose in addition to fulfilling the role of adequately evaluating the performance of the units and other areas within the organization. Should the institution consider the adoption of a new performance management tool that is compatible with the institution's social mission and provides assistance in the implementation of its strategy, it should search for a performance management artifact that is able to integrate itself to the institution's strategic plan. Such artifact would also need to be compatible with (or adaptable to) the reality of public organizations and/or hospital organizations, taking into account cultural and contextual factors, at the same time as being able to promote an alignment of goals among all relevant areas in the organization.

It is suggested that the institution revise its current incentive plan because this plan is not capable of encouraging employees to take desired actions. Due to this fact, the plan can be considered an expense to the organization – one that is not achieving its desired impact. Moreover, the offering of compensations through permanently supplying materials might be questioned, because in areas which suffer from the absence of permanent materials, these resources might be considered a need and not an award for achieving goals. For areas that no longer need permanent materials, in their turn, receiving these assets might result in the acquisition of superfluous items or perquisites.

Despite the limitations of the present study, because it is a case study, the aim is that the investigation might provide theoretical and practical subsidies for similar or related organizations, such as federal university hospitals, university hospitals from other government spheres, other public or philanthropic hospitals, and agencies responsible for public health management. It is expected that the evidences here presented can contribute for the development of performance management in these organizations, emphasizing the importance of the congruency of this artifact with the institution's strategy, which is according to the state of the art of the academic literature, and can contribute to the efficiency, efficacy, and effectiveness of the actions developed. Knowing how strategic performance management in a university hospital occurs may help scholars in areas such as public administration and management accounting understand how this process is adapted in practice, and enable them to point out practical improvements considering what is known in the field.

Finally, researchers in the field of management accounting are encouraged to carry out new studies that might add to the roster of academic research in this area, like new case studies in similar institutions that use other performance management artifacts or the proposition of strategic models of performance management that can be used in these institutions. By contributing with proposals and empirical research applied to public institutions, especially those connected to healthcare, researchers in management accounting might foster improvements in the use of public resources and in the effectiveness of the services provided, resulting in advantages for society as a whole.

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