

PROSPECTIVE PAYMENT SYSTEMS AND EVOLUTION OF MANAGEMENT CONTROL IN FRENCH HOSPITALS: AN OVERVIEW

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Abstract: *This analysis aims at contributing to the debate by exploring recent changes in French public hospitals. It will try to show how a new financing system can entail deep changes inside the management architecture. The structuring of the management control function is still in gestation. In most hospitals surveyed, this function is still at its early stages. There is still a long way for management control in acquiring a real legitimacy, especially from professionals. A key to success lies in the ability of institutions to recruit (and retain) a staff up to the current stakes, both able to overcome technical difficulties of the hospital management (including the T2A) and place themselves in intermediation between medical and management logics.*

Key words: *prospective payment, management control, hospitals, France.*

JEL Classification Codes: M40, I10

INTRODUCTION

In a few decades, management control has become a major component of management in corporate organisations. It arrived later in non-profit organisations and particularly in public ones. The absence of profit as the unifying theme of the management control function (Anthony, 1993), the difficulty of finding a causal relationship between resources and outcomes (Anthony & Young, 1988), the absence of a genuine market in which the demand can be expressed (Burlaud & Laufer, 1980) explain much of the delay.

The particular nature of the hospital organisation, traditionally seen as a professional organisation (Scott, 1982, Bourn & Ezzamel, 1987) or a professional bureaucracy (Mintzberg, 1982), where management has a "*problem of legitimacy*" (Bouquin, 2004), is also an obstacle to the development of management control. As Scott said (1982): "*Physicians have insisted on their prerogative to control over output (patient care) goals; and administrators have tended to accept the definition of their own domain as limited to organizational support or maintenance objectives*". Therefore, public hospitals in France have long experienced difficulties in establishing and developing a real management control function (Cauvin & Coyaud, 1990; Moisdon & Tonneau, 1999).

The arrival of new ways of thinking public management in the 80's, theorized under the expression "*New Public Management*" (Hood, 1991) has put forward those concepts in public organisations. The New Public Management has also diffused its ideas in hospitals. But above all, the implementation of new funding systems for hospitals, such as the prospective payment system (PPS) in the United States and its epigones in Europe and much of the Western world, has profoundly changed the situation. As a matter of fact, the PPS -which "*combines the elements of public sector contraction and commercial pressures*" (Coombs, 1987), entails a great uncertainty and a financial risk for hospitals. Thus, it leads to building systems and tools for

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more sophisticated analysis and cost control (Young & Pearlman, 1993; Hill, 2000). The law on financing of French Social Security of 18 December 2003, which introduced a reform of the hospitals' financing system, called "*Tarifcation à l'activité*" or more generally "T2A", is following largely these reforms (Schreyögg & al., 2006) and leads the hospital system towards a high risk area.

In this context, the question of management control becomes crucial for the organisation. However, it is clear that the political-economic environment is not conducive to step back and reflect calmly on the subject. The strong financial pressures weighing on health care facilities force hospital management to develop short-term strategies and do not allow a thorough examination of the purposes of management control.

This analysis aims at contributing to the debate by exploring recent changes in French public hospitals. It will try to show how a new financing system can entail deep changes inside the management architecture.

In a first part, we will highlight the paradigm change in hospital management and the acceleration of this process since the implementation of the tariff reform.

The second part of our presentation, which will be largely based on concepts and models developed for business corporations, will seek to establish a number of assumptions about the possible evolution of the management control function and particularly of its organisation in public health facilities.

In a third part, we will try to compare these assumptions to the reality on the ground and in particular, by studying the evolution of the management control in private companies and conducting an exploratory study in several hospitals in a French region and on the basis of official documents issued by the French Department of Health.

I - THE REVOLUTION OF PARADIGMS OF HOSPITAL MANAGEMENT

I.1 - An attempt to transpose the framework of management control of the company

The French hospital system has known early attempts to transpose patterns from industry and trade. Internal contracting is one example. For nearly forty years, long before such steps were undertaken in the state services, and before we can speak of management control in the public sector, internal contracting structures were established in hospitals. As a matter of fact, the concept of responsibility centres has emerged in health care facilities in the early 1970s (Law of 31 December 1970). The aim of this reform was to curb the level of the hospital expenses that had grown to a significant extent since the early 1960s. Despite some experiments, this new management fad has had a limited effect (Lévy, 1976).

The establishment of the overall budget in the 1980s has given new impetus to internal contracting. But what could have been an opportunity to renew modes of hospital management was in fact a variation of the logic of the overall allocation between health care funding authorities and health care facilities. The results of this experiment has not been up to the expectations of its promoters. Critics were quick to rise in the early 1990s : each player used a rustical system to its advantage, without consistency or overall plan (Cauvin & Coyaud, 1990). The failure to take activity into account for budgets allocation (the budget responsibility centres was established on a historical basis) was a major pitfall of the model (Demeestère and Viens, 1976). Each facility reproduced the internal mechanism for resource allocation of the overall budget with all its limitations: lack of incentives and perpetuation of inequalities.

The progressive use of the program of medical information systems (PMIS) in the mid-1990s and the use of this tool as a means of controlling (Lenay, 2005), has reinvigorated the internal management. The gradual spread in minds of the idea of medical budgets gave new impetus to internal contracting, which had just been brought up to date by the law of 24

April 1996. However, the PMIS -which is an adaptation of the diagnosis-related groups system- was not ripe yet for a direct use in responsibility centres. It only covered activities of medicine, surgery and obstetrics (MSO), did not take proper account of multiple stays and above all, medical activity was not described with sufficient specificity. Moreover, even though it helped to "*lift the veil of obscurity*", the PMIS did not destabilize the system of political relationships that characterize the hospital system (Lenay & Moisdon, 2000). Ultimately, the main lesson to be learned from this experience is that, as in the industrial company of the early twentieth century, devolution has created the need for control. Although initially the aim of management control was to follow the instructions or at least the incentives of health authorities, the delegation of management to responsibility centres provided the foundation for a management control function that did not exist before. But the model remained relatively unsophisticated: the management control function merely recorded expenditures of responsibility centres, without the possibility to understand the origin of resource consumption. The tasks of the employee in charge of management analysis (not yet called "management controller") were mainly simple accounting and budgetary activities: monitoring of consumption of products stored or not stored, monthly personal expenses, compliance of responsibility centres with budget limitations. The concept of total revenue was not a concern since the revenue level was guaranteed by the overall budget allocation. Activity indicators (number of admissions and days, occupancy rates and average length of stay) were monitored in a dashboard but were not actually operational because funding was independent of activity. In short, control was done primarily on the inputs and the concepts of efficiency and effectiveness were largely ignored. Moreover, there was no need to use a higher qualification for staff in charge of these missions: the most common profile was a mid-ranking executive, mid-career and having a taste for accounting and "figures".

The implementation of the T2A has challenged the business model in place in most hospitals:

- In the original model of the PMIS, the so-called "homogeneous groups of patients" (very similar to the original diagnosis-related groups) were not directly priced, one should pass through an index in order to give them a financial value²; in the new T2A model, homogeneous groups of patients become "homogeneous groups of stays", which are directly priced in euros.
- The expanding range of activities covered by the new pricing, and especially the link between the activity and funding is a new challenge for hospitals and a questioning of traditional thought patterns of hospital management.

I.2 - A landscape largely changed by the arrival of the T2A

The T2A has reintroduced the link between level of activity and funding, which had been suppressed by the overall budget (from Pouvourville & Tedesco, 2003). This principle entails many consequences which are difficult to assess now. However, we can give an overview:

I.2.1 - A genuine "medicalization" of budgets responsibility centres

The T2A confirms and expands the use of PMIS for the allocation of resources internally. The PMIS did not allow an optimal allocation of resources, not only because of its limited scope (to MSO). The T2A opens a wider scope for medical funding: many activities are subject to a financial valuation (chronic renal failure, abortion, emergency switch, etc.).

Because each clinical activity is directly quoted in euros (as already said, it is no longer necessary to pass through the point ISA), it enables a more direct readability of the cost of

² This index was called "*Indice synthétique d'activité*" (ISA) in French, which could be translated as: activity synthetic index. The value of this index could tremendously vary from a region to another.

care. Ultimately, with the T2A, the logic introduced by the PMIS finds its natural extension and leads to a medicalization of the “*manager gaze*” (Moisdon & al., 2006).

I.2.2 - A reversal of the traditional budgetary logic

The traditional mode of budget devolution, restricted to expenditures of responsibility centres, gave managers an incomplete vision of reality and promoted biddings. The goal was to capture the largest possible share of the collective resource to build up a reserve (Cyert & March, 1964). The system of bureaucratic control involved in this so-called delegation generated a “*dysfunctional game*” (Löning & al., 2003) repeatedly described in academic literature. With the T2A, the level of revenue determines the level of expenditures authorized. There are at least two consequences in this reversal:

a) A complete accounting information and not limited to costs, can make doctors understand the economic reality of their activity. In fact, enjoying a more complete information, the medical professionals are no longer in a relationship of dependency towards management, but could become full partners. A new relationship could be established between traditionally opposed parties.

b) The introduction of the “income” no longer limits the reasoning on budgets curtailment: a development of the activity can be well considered if it brings more resources than it consumes. In for-profit organisations, managers may exceed the allocated budget if the generated profit is bigger than this budget (Anthony, 1993). So far, this was not the case for non-profit organisations such as hospitals ... but could become a reality if we follow the logic induced by the T2A.

I.2.3 - A new distribution of roles

In the system of the overall budget and its corollary -the budget delegation towards responsibility centres, the general management held all the cards. It controlled the upstream resource by collecting the global endowment, and downstream by the budget allocation towards responsibility centres. As there was no direct link with activity, physicians or operational managers could not rely on the increase in this activity, in order to ask for additional budget. Undeniably, the model of cost control, introduced by the overall budget, gave a strong power to the central services and general management. Although this one was generally unable to influence the process of “production”, its control of financial resources allowed it to offset the medical power.

Under the system established by the T2A, the production of care has become the major means for the funding of the organisation. Operational services -particularly clinical services, *de facto* provide resources for the entire organisation. Indeed, internal contracting can no longer rely on a principle of limiting resources without medical fundament -as it was the case with the overall budget, it requires the invention of new management practices (De Pourville & Tedesco, 2003).

In this entirely redefined framework, the management control function must be renewed and find its position within the organisation. The scope of the management control and therefore, of management controllers, is sentenced to metamorphose.

II - POSITION OF MANAGEMENT CONTROL, AND GOVERNANCE OF THE ORGANISATION

Until recently, the priority given to requests from health authorities did not allow hospitals to think about their internal control. Building internal control of the hospital in response to supervisory procedures conceals the real questions on the nature of management control (Cauvin & Coyaud, 1990). Changes in hospital management and, as we have just described it, the mental

revolution introduced by the T2A, require to design new control systems and steering from the institutions management.

II. 1 - Management Control and organisation's steering

As it can be observed in industrial and commercial settings, the management control function in hospitals is undergoing deep challenges. Is the traditional bureaucratic control system, focused on inputs, losing ground to a new framework, more organized around the concept of steering?

The analytical framework developed by Lorino (2003) is a key to highlight this debate. The author establishes the concept of “*schéma de pilotage*” which can be translated by “steering scheme”; it can be defined as how the company intends to operate in terms of culture and overall control logic (Lorino, 2003).

Lorino distinguishes two steering logics:

- The logic of financial accountability (profit and cost centres) based on the principle of individual accountability and delegation (with internal contracting). The organisation is divided into autonomous areas established as responsibility centres; a principle of decentralization is implemented. This logic is deeply rooted in the theoretical framework of the Agency Theory.
- The strategic and operational logic, closely related to the deployment of corporate strategy. It is based on a cause/effect analysis that compels to go into the technical core of the process. More complex than the financial logic, it is necessary if the business has reached a certain level of integration between the units and functions (interdependencies, synergies) and a certain degree of complexity. From a theoretical point of view, this logic comes from the Organizational Learning Theory.

Can this theoretical framework -inspired by the practice of industrial and commercial companies, be implemented in hospital settings? The T2A revives the debate: the logic of the overall budget subordinated the activity of responsibility centres to the budget provided by general management; now, a new logic determines the level of expenditure on the revenue generated by clinical units. Thus, the logic of economic equilibrium throughout the facility could be implemented at the clinical centre level. In a context of full implementation of T2A, the transposition of the model of financial accountability is not totally excluded, at least in theory. In this sense, clinical directorates could become genuine managers responsible for autonomous entities, as can be seen in European countries experimenting PPS (Kurunmäki, 1999; Vagnoni & Abernethy, 2004).

The choice of a model rather than another is clearly not without consequences for the definition and the "territory" of the management control function.

II.2 - The evolution of the management control function

The acknowledgment of management control in French hospitals is relatively recent. In many public health facilities, the lack of management control structures and, when they existed, the lack of trained professionals, able to grasp the hospital complexity, was often common so far. So as to fill this gap, most university hospitals and many community hospitals have established specialized services.

For Bouquin (2004), management control is a key component of corporate governance. As such, it helps managers to understand the future and act accordingly; it also helps to steer or control the actions of their employees and partners, including, in large structures, what they can't meet directly (Id.). In other words, it is precisely the question of the steering of the organisation. In an era of scarce resources and PPS, it seems difficult to imagine a hospital without such a management tool.

But the issue of the architecture of the management control function still remains: should it be centralized or decentralized? And which entity should it depend on?

II.2.1 - A centralized or decentralized management control?

As Lorino showed (2003), the control function can be an autonomous chain, separated from operational functions, or on the contrary, linked to operational functions. The choice will be determined by the steering scheme chosen by the leaders.

Most of the time, when financial logic prevails, the management control function is an autonomous entity, separated from operational units and related to the company management.

On the contrary, in a strategic and operational logic, it is better to bring closer control functions and operational functions in order to create a real harmony between economic and operational culture. The control chain is then subject to a kind of "*professional sponsorship*" from the central management control department (Lorino, 2003).

As this distinction shows it, in the first case, the main role of management control is to monitor an outcome or a performance of an autonomous entity. In the second case, its main role is to back operational units.

The debate is not new in public health facilities and especially in university hospitals. The large size of these institutions, that implies a great distance between operating units and management, can lead to advocate a reconciliation of management controllers to these units. Most of the time, the structuring of the management control function depends on how general managers consider delegation of management. However, decentralization doesn't mean lack of coordination: whatever the mode of organisation selected, there is always a central service that coordinates the system. It remains to be seen whom this coordination entity depends on. However, if the issue isn't new, the introduction of the T2A revives the debate on public health facilities.

II.2.2 - What reporting line for the management control function?

The question is as old as the discipline itself and depends on the role the organisation assigned to it (Bouquin, 2004). Organisational choices are closely linked to organisational strategy and none of them is more legitimate than another. The implementation of the T2A has raised the issue within hospitals: management control, as a translator of medico-economic data, is at the crossroads of the financial and organisational logic and can legitimately be under the control of the finance or of another department (senior management, management information systems...).

Two different views stand out:

- The first one is that the management controller guarantees the reliability of accounting data. The medicalization of funding introduced by the T2A gives new strength to this view in so far as funding is inextricably linked with the extent of the activity. Indeed, the financial department needs skills for the treatment of medico-economic information in order to be able to build the budget of the establishment. In this view, the management control department can find its place in this service easily.

- The second one makes the management controller a major actor of change. According to this view, management control has enlarged its sphere of influence towards the field of strategy and operations, in connection with operators benefiting from decentralized responsibilities (Bouquin, 2004). Thus, the objective of overall economic performance and "*engineering of change*" assigned to him (Lorino, 1991) argue for an alternative solution. The tariff reform is a powerful incentive to organisational change, both in terms of the operational unit and of governance. In this case, the incorporation of management control in a department other than the financial arises with force.

II.3 - The new positioning of the department of medical information (DMI)

The DMI has an important place in hospitals, especially since the Decree of 20 September 1994 which requires every health care facility to collect and process medical information on patients for the evaluation of medical activity. In fact, the DMI ensures the recovery of data from the PMIS, their quality and then contributes to an optimal seizure of activity. The physician responsible for the DMI has become the main actor of PMIS in each institution (Lenay, 2005).

In the context of the overall budget, medical information was not a real issue. With the T2A, it becomes vital since the level of activity determines the level of funding. In these circumstances, the role and positioning of DMI, a medical service under the responsibility of a hospital physician but closer to the technostructure than the operational units, raise many questions.

A first question concerns the nature of the functions of DMI in relation to the typology established by Anthony (1988):

- On the one hand, many of the actions undertaken by the DMI and in particular those done by medical information technicians - MITs - could be considered as an operational control (or a tasks control) rather than management control.
- But on the other hand, the behavioural control exerted by the DMI on health professionals, and the increasingly strategic value of medical information, can place the action of DMI in the field of management control. Thus would it be a new type of management control?

A second question concerns its location in the structure: as a service in charge of control of medical activity, what are its relationships with the management control department? And when this one is not clearly identified, what is the department of reference? This is one of the core issues hospitals must face, given the increasing medicalization of management control.

These theoretical questions have to undergo the comparison with field observations. To do this, an analysis of results in the industrial and commercial sector is a prerequisite. In a second time, this will enable to take stock of the management control function in hospitals.

III - THE EVOLUTION OF MANAGEMENT CONTROL IN ORGANISATIONS

The management control function and the physiognomy of the management controller in industrial and commercial settings, have experienced significant changes in the last twenty years. And though the corporate world is a priori quite different from that of the hospital, a comparison of the evolution of management control in the two sectors may be very interesting.

III.1 - A significant change of the controller management function in the French industrial and commercial sector

The observation of French corporate organisations attests the changing role of management control and of management controllers. The latest available study has been led by Jordan in 1998³. Though this study is now ten years old, it is a unique material to evaluate the evolution of the profession. As the author recalls in the introduction, the standard management control system does not exist and it is strongly dependent on the size of the organisation in which it operates (among other contingency factors). A certain number of findings of this study are closely linked to our issue.

First of all, evolutions can be observed between 1989 and 1998:

- A strong development of planning tools

³ Jordan, H. (1998), Planification et contrôle de gestion en France en 1998. Cahiers de recherche HEC.

- An improved accountability of operational managers on their forecasts and their corrective actions
- An increased cooperation between management controllers and operational managers
- Then, the observations made in 1998 gave the following results:
- There is a definition of the job of management controller in most large firms and in half of small and medium-sized firms
- The head of the central management control department is more often linked to the chief financial officer (CFO) (60%) than to the general management (40%)
- 70% of large companies and 20% of small companies with less than 500 employees have decentralized management controllers (in the operational units)
- In most large companies, the decentralized management controller is hierarchically linked to the operational manager, even though the affiliation with the management control department is gaining ground between 1989 and 1998 (in contrast, in medium-sized enterprises, decentralized management controllers are mainly linked to the management control department)
- Finally, the controller's role is evolving towards system design, animation and decision support at the expense of a technical role dedicated to the production of data

These results show a deep change in management of organisations in general and in management control in particular. We can assume that the development of new information technologies and communication, the implementation of integrated systems like enterprise resource planning software has certainly emphasized the trends highlighted in Jordan's study.

These data are very valuable and will guide our thinking on the evolution of the management control function in hospitals. Indeed, if hospital management can't be compared to the one of an industrial and commercial company, the fact remains that management control in hospitals has often followed the lead of its counterpart in the corporate sector. Many innovations observed in corporate settings have been included in hospitals, more-or-less successfully. Besides, hospital managers have shown a continuous interest in these innovations.

III.2 - The management control function in hospitals is undergoing deep changes

III.2.1 - The recognition of the profession of management controller

The job of management controller is now officially acknowledged, essentially from the point of view of management jobs and skills. The directory of occupations designed by the Hospitalization and Health Care Provision Department (DHOS is the French acronym) in 2004, is an obvious proof of this recognition. This document is the first national tool designed to implement a management of jobs and skills and to standardize job descriptions in French hospitals. 183 sheets detail each job identified so far, and one of these sheets gives an accurate definition of the management controller function.

Some items in this sheet deserve special attention and especially, the definition of the job: "*develop and implement methods and tools to ensure efficient use of resources and to carry out the steering and control functions by the management*". As this definition shows it, the roles of design and animation highlighted in the previous study (Jordan, 1998) clearly appear. The hospital management controller in 2004 (date of the edition of the job directory) is no longer confined within a technical role limited to the production of accounting data, or at best in financial reporting. He is supposed to be a central element in the management of the organisation.

The main activities outlined in the specification sheet follow an organisational steering logic. For example, we can underline the following items: "*advice to the general management and administrative and medical management*" or "*development of tools to help in the definition and evaluation of the strategy of the establishment*". These strategic activities are based on

know-how required to translate a high level of conceptualization (for instance: “*being able to lead an advisory and audit mission in economic, financial and organisational fields*”).

From now on, this level of conceptualization demands a post-graduate degree for a possible recruitment. A specialization in management control (obtained in a Business School or at University) is considered as a prerequisite for exercising the job.

The missions described in the sheet confirm the trends identified by Jordan in his study (1998):

- a. Decentralization and specialization
- b. Association of operational managers (in our case, medical and paramedical), themselves more accountable for their management
- c. Primacy of design functions, to the detriment of technical ones

The directory's sheet seems to reflect the position and the role of management controllers in hospitals. Does this vision fit with the reality observed in the field?

III.2.2 - Organisational changes in the field: the example of eight hospitals

We might think that a now well-established presence of management control in many public health establishments shows the recognition of the profession of management controller by DHOS. What is it really?

Hospitals are experiencing a relative disparity in the structure of management control. There are many reasons for that: management priorities, lack of dedicated human resources, weight of the medical professionals. Five years have elapsed since the edition of the job directory, and the implementation of the T2A. Has this period been conducive to a strengthening of management control?

We will try to provide some answers through a survey on public hospitals and see the structure of management control and its evolution.

III.2.2.1 - Methodology

We chose to keep a sample of the eight largest hospitals in a region of France. We thought they were likely to host a clearly identified management control department. This sample, which represents 87% of the supply of regional public health care, includes large institutions which generally have a significant techno-structure, and smaller institutions, which are less well endowed. All the establishments surveyed are covered by the T2A.

One of the particularities of the region is that it hosts two university hospitals. This is not the only case of redundancy within the same region in France. However, there are significant differences in terms of budget, staffing and capacity between the two institutions.

The collection of information was done by questionnaires sent by email to each CFO of the sample in early April 2008 (for the hospital No. 4, the head of the management control department has been interviewed). A telephone conversation was sometimes necessary to clarify some items. The return rate was excellent since we could get 100% of answers. In order to make the responses anonymous, institutions were ranked from 1 to 8 in the order of return of questionnaires. For hospitals No. 1, 2, 5 and 8, the respondent was the CFO. For hospitals No. 3, 4, 6 and 7, the respondent was the head of the management control department.

III.2.2.2 - Results of the study

a) Preliminary remarks

Unlike Jordan's study (1998), the total number of employees of the organisation hasn't been chosen as an explanatory variable. The objective was to get a reliable information and to enable comparability between the establishments. The way of counting the staff diverges a lot from one hospital to another, and any comparison attempt quickly reaches its limits (even for health authorities). However, we chose the theoretical value of the position so as to compare the

number of management controllers (and similar). As a matter of fact, the job may be vacant but its theoretical value represents the effort of the institution to ensure the activity.

The most representative explanatory variables are the operating budget, which is an inescapable and undeniable datum, and the number of beds and places. On this last point, it should be noted that the number of LSO beds could be considered as having a greater relevance than the total number of beds and places. Because of its recurrent nature, the LSO activity is much more controllable and therefore justifies the use of management controllers more easily. However, the total number of beds and places is generally the most commonly used parameter to describe the level of capacity.

Another important remark concerns the workforce to study. And in this case, the task is far from obvious. Indeed, what are we talking about exactly? Are we talking about the management controllers identified as such in the institution? Or the whole management control department (when this service exists)?

These questions are crucial. Take the example of hospital No. 4: the management control department is composed of genuine management controllers, but also computer specialists, administrative staff, and of course managerial staff.

Choices were required, so we decided to take the overall staff of the management control department, because it is the only indicator that can reflect the strike force of the management control function within the organisation. As a matter of fact, in some hospital settings, the role of the management controllers can be assigned to various employees -sometimes with a different rank, although they carry out the same missions. Finally, as previously said, the expression "management controller" in hospitals is a function or an occupation, not a rank. Therefore, it is very difficult to know the precise number of management controllers in hospitals, and only the declarative method enables a relevant information.

The most relevant indicator for measuring human investment in the management control function within the organisation is a ratio, itself divided into two ratios:

- The actual whole-time equivalent staff (WTE) of the management control department for a range of 100 million euro budget.
- The actual whole-time equivalent staff of the management control department for a range of 500 beds and places.

As we will see, the value of each ratio (and thus the relative weight of the management control function) can differ between hospitals.

b) Results of the survey

b.1) The structuring and positioning of the management control function

All establishments surveyed have a management control department or at least a management control function clearly identified. Apart from hospital No. 4 which has a long established and highly organized department, and hospitals No. 2 and No. 3 which have had a management controller for nearly a dozen years, the development of this service has been relatively recent for others (less than three years). This observation already gives a glimpse of the influence of the T2A in the development of the management control function. In all cases, this department is hierarchically linked to the CFO. This fact confirms the trend highlighted in Jordan's study.

The recruitment level has become more demanding: a master degree specialized in management control is now commonly requested. All the establishments, except the hospitals No. 1 and No. 8, employ a management controller with a high academic level. These results confirm the growing professionalization of the job and the orientation towards design and piloting tasks. They are conform to the job directory's specification sheet in all respects and to the trends brought to light by Jordan's study. One of the effects of this homogenization of

recruitment patterns is the gradual mixing of potential recruits: hospitals get students from the same "stock" than other employers. This factor is not without consequences for increasingly nomadic youth management controllers.

b.2) Human resources dedicated to the management control function

As it might be expected, management controllers are more numerous in the largest hospital of the region. A policy strongly oriented towards information systems and monitoring during many years has enabled this establishment to invest important human and technical means in the management control function. With a team of 10.6 WTE (plus 1 WTE management controller attached directly to the CFO), the management control department has got exceptional means, even compared with other similar hospitals.

These data are given in absolute value. If we take the data into account in relative terms, the situation is somewhat less obvious as shown in table 1 below⁴:

Table 1. Human resources dedicated to the management control function

	H1	H2	H3	H4	H5	H6	H7	H8
Operating budget (M€)	75	129	95	675	191	121	282	100
Number of MSO beds	-	341	-	1908	-	501	-	258
Total number of beds and places	505	1046	820	2808	1076	814	1332	700
Management controllers	0.8	1	1	7.8	1.2	1	2	1
Management control staff	0.8	3	1	11.6	1.2	3	2	1
Management control staff for 100 M€	1.07	2.33	1.05	1.72	0.63	2.48	0.71	1
Management control staff for 500 beds and places	0.79	1.43	0.61	2.07	0.56	1.84	0.75	0.71

Notes:

(1) *H* means "hospital"

(2) *Total staff of the management control department*

If we accept the criterion of capacity, hospital No. 4 is at the top end of the sample. However, taking the financial criterion into account shows the dominance of hospital No. 6 with a ratio of 2.48 WTE for 100 M€.

A lesson can be learned from this empirical observation: technostructure doesn't necessarily grow with the size of the organisation. As a matter of fact, large resources can be devoted to this function despite the smaller size of the establishment (in this case, the hospital No. 6).

Another lesson can be learned: if we examine the management control function more carefully, the devoted human resources can actually be higher than those announced. As a matter of fact, hospitals have had to implement a new reform so-called "*new governance*" since 2005. This reform has created the "*pôle*", which is the French equivalent of the clinical directorates (CD)⁵. It gathers a clinical director (which is a kind of operational manager), a nursing manager and a management officer (also called "*business manager*" in English-speaking studies⁵). In hospitals that have been able to implement this reform (which is the case of hospitals No. 2, No. 4 and No. 7), this latter function can be considered as a decentralized management controller, even if it

⁴ The staff is counted in whole-time equivalent

⁵ The model of clinical directorates has spread widely across European countries; for example, a precise description of the structuring of the CDs in Italy is given by Lega (2008)

doesn't benefit from this designation formally. As most of the companies with more than 500 employees surveyed in Jordan's study, these controllers hierarchically depend on the local manager (in our case, the clinical director), even though a strong functional relationship exists with central management controllers. Therefore, to measure the actual weight of the management control function, we must count the actual staff of management controllers. That includes all the management controllers (or similar), even those working in CDs. Therefore, as shown in table 2 below, the numerical weight of the management control function can be very significant:

Table 2. The numerical weight of the management control function

	H1	H2	H3	H4	H5	H6	H7	H8
Operating budget (M€)	75	129	95	675	191	121	282	100
Number of MSO beds	-	341	-	1908	-	501	-	258
Total number of beds and places	505	1046	820	2808	1076	814	1332	700
Management controllers	0.8	1	1	7.8	1.2	1	2	1
Management control staff	0.8	3	1	11.6	1.2	3	2	1
Management control staff for 100 M€	1.07	2.33	1.05	1.72	0.63	2.48	0.71	1
Management control staff for 500 beds and places	0.79	1.43	0.61	2.07	0.56	1.84	0.75	0.71
CDs' management officers	0.5	3	0	14	0	0.8	5	0
Total staff of the management control function	1.3	6	1	25.6	1.2	3.8	7	1
For 100 M€	1.73	4.65	1.05	3.79	0.63	3.14	2.48	1
For 500 beds and places	1.29	2.87	0.61	4.56	0.56	2.33	2.63	0.71

b.3) Missions of management controllers

The tasks of the classical management controller such as the production of dashboards, updating of data from management accounting, monitoring of expenditure, are still the bedrock of the job. The "securing" of accounting data and the production of figures are a prerequisite for meaningful dialogue with CD⁶s. We can notice the emergence of revenue dashboards, which require highly accurate tracking, especially with a T2A rate of 100%.

Next to these traditional missions, the results of the questionnaire highlight new ones. Hospital No. 4, for example, distinguishes three transverse missions: an informative mission (oriented towards production of figures), a financial mission (monitoring of expenditure and revenue) and a strategic mission (benchmarking and medico-economic studies). This latter role, although not clearly identified, appears in watermark in the answers of other hospitals.

b.4) Relations with the DMI

In general, relationships between the management control department and the DMI are close. There is nothing surprising given the new momentum generated by the T2A on medical data. The DMI controls the management of PMIS: it feeds the data base of medical activity that will be used later for the medico-economic studies led by the management controller.

If the DMI lies at the heart of medical information, it is not necessarily limited to operational control and its role may be extended to tasks originally assigned exclusively to management

⁶ See Bloomfield & Coombs (1992); Robbins (2007)

controllers: *“The DMI analyses the results of the CDs in relation with the management control department and the CFO”* (Hospital No. 5). In a way, the medicalization of budgets introduced by the PMIS and strengthened by the T2A brought a “medical gaze” in the accounting analysis. This close collaboration between the DMI, financial services and management control can lead to mixing those departments in a medico-economic cluster. This integrated structure, that can be observed in hospitals No. 1 and 6, perhaps foreshadows the future organisation of services for analysis and decision support.

b.5) Influence of the T2A on management control

Undoubtedly, the T2A is a factor in the development of management control. To the question *“Has the T2A changed the role of management controller?”*, all the hospitals surveyed replied *“yes”*. Most of them gave structured answers and some major axis can be identified:

- The income dimension becomes prominent in hospital management. As one establishment said, *“The T2A put revenue at the heart of the funding system”*. Therefore, *“hospital management, ethical questions set aside, comes more and more closer to corporate management where unprofitable activities, although essential, must be financed by profitable activities”* (hospital 4).
- In this new framework, the retrospective analysis gives way to a *“prospective analysis of the activity's evolution”* (hospital 2). There must be *“(…) a role of foresight in relation to activity forecasts* (Hospital No. 5).
- The management controller sees his role evolving: it *“helps decision-making through analysis of the profitability of the establishment's future operations* (hospital 2), it *“must be an educationalist to explain reforms at best, and their impact in the daily management of CDs”* (Hospital No. 5).

The traditional missions of the management controller still exist in spite of these new guidelines identified for the management control function. There isn't a substitution phenomenon but rather, a kind of "sedimentation". In order to have a clear and consistent message, it is necessary to have indisputable tools. *“Because the level of income is directly related to the level of activity, management problems now affect field actors. This implies the need for an information system and for effective dashboards”* (Hospital No. 4). And so, people who are able to handle them...

b.6) The future of the management control function

According to most hospitals surveyed, there is no doubt that the management control function is going to go through big changes.

The main trends are:

- A strengthened positioning in the organisation:
“the management controller will become a central player in the system” (Hospital No. 5). It must be in permanent contact with the central services (finance, information systems, DMI) and the CDs. The management controller is certainly going to become the interface between staff and line and not just the general management's right hand.
- A role which is clearly evolving towards expertise:
“it should enable an informed decision (...) in the context of the T2A (...)” (Hospital No. 5); *“(…) medico-economic studies on the financial efficiency before implementation of any new activity or purchase of expensive equipment”* (hospital 3). - Ultimately, a role of internal service provider in connection with strategic directions of the institution:

As hospital No. 2 summed it up very well: *“(…) It is a new job that will go beyond ‘the person in charge of costs’ to become a job of strategy consulting and of steering assistance, which reconciles support to strategic decisions and strengthening of ties with field actors.”*

CONCLUSION AND PROSPECTS FOR FUTURE RESEARCH

The management control function in hospitals has undergone big changes in recent years. Management control was traditionally based on budget limitation. This type of control is giving way to a new form of control, which increasingly looks like what Demeestère (2002) calls the "*performance management*". In this respect, the T2A is a powerful lever of change. By questioning the way financial resources are allocated, the tariff reform is far from merely a technical measure but alters the sense of collective action. By giving a monetary value to clinical activity, the T2A has introduced an economic dimension in assessing the performance of clinical units. Clinicians can no longer ignore the economic impact of their medical choices. Now, they are now accountable to others for their decisions (Bourn & Ezzamel, 1986; Preston, 1992).

As a consequence, the job of management controller is experiencing a fundamental change: initially seen as a "watchdog" or a kind of "Big Brother", the management controller is becoming a service provider for CDs and clinicians. As said Harrison & Pollitt for hospital accountants (1986), it "*moved away from the negative control aspects of accountancy to the positive provision of an information service to the clinicians*". His level of qualification required now, the tasks he is given, make him an interlocutor that can't be ignored and a first-rank strategic player (Demeestère & al., 2004).

Therefore, public health facilities, at least the most advanced in the structuring of the management control function, must now think about the purposes of the control system and try to develop a "*management pattern*" (Demeestère & al., 2004) or a "*steering pattern*" (Lorino, 2003) in agreement with the new budgetary and accounting framework introduced by the T2A.

The task will certainly be delicate because it challenges the mental representation of the various stakeholders, including general managers. It requires accountability of the various protagonists and the gathering of the separated spheres of the economic and of the medical (Claveranne & Pascal, 2005). And of course, it also requires the ending of the traditional clash between doctors and managers. Although difficult, this task is necessary: the evolution of management control in hospitals has not dispelled the ambiguity that Löning & al. (2003) described for industrial and commercial settings (quite transposable in the hospital environment). This fundamental ambiguity, which arose from the difficulty in determining internal clients of management control (general management or operational units?) must be lifted sooner or later. Otherwise we would face the revival of traditional conflicts in hospitals in addition to classical phenomena of power perimeters, common to all organisations. Therefore, a vast organisational change arises in public health facilities: the implementation of the T2A puts clinical units and CDs on the forefront. As already noted, their level of activity determines the financial resources of the whole institution. A rethinking of the management architecture, in particular the scope for action, autonomy and perimeter of CDs, has become crucial.

The structuring of the management control function is still in gestation. In most hospitals surveyed, this function is still at its early stages. There is still a long way for management control in acquiring a real legitimacy, especially from professionals. A key to success lies in the ability of institutions to recruit (and retain) a staff up to the current stakes, both able to overcome technical difficulties of the hospital management (including the T2A!) and place themselves in intermediation between medical and management logics.

But above all, the question lies in how hospitals define the essentials of the management control function. For historical reasons, management control most often remains under the control of the CFO. Yet, the rise of CDs entails a need for managerial skills for which few institutions were able to answer so far. Establishments that have devoted human resources for this new mission, have appointed dedicated officers. In our opinion, this new job seems to fill the

criteria used to define the decentralized management controller in corporate settings (Jordan, 1998; Corfmat et al., 2000). It must be noted that this decentralized management control function is not acknowledged as such in hospitals. Does this lack of institutional recognition show the fear of general managers to see the centre of gravity of management control moving?

This study could not exhaust the subject. For example, management control has not been studied in private health facilities, which are also subject to strong financial pressures. The results of our study, however, enable to identify several avenues for future research:

- The role and position of the managers in CDs. This job previously existed in some hospitals, but the law on the "new governance" (2005) has helped with giving it an official status. Further investigation on this new position could help to identify new trends in management control as a whole. It could also help to define a new steering pattern for hospitals.

- The evolution of the management control function within hospitals can no longer do without the missions and the positioning of the DMI. The importance of analysis and quality control for PMIS data, the link between these missions and strategy of the hospital, give it considerable weight. Most often with no hierarchical link with management, the DMI is an autonomous actor sometimes in territorial dispute with the management control department. The development of a medicalized management control, consequence of the PMIS and the T2A, undoubtedly strengthens the position of specialists in medical information. Therefore, will the DMI be exclusively in charge of the management control in the future, or will this one be exercised on a shared basis between the main actors (and if so, how)?

We think that issue is a promising research topic.

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