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**TITLE: DRG BASED FUNDING SYSTEM IN FRENCH
HOSPITALS: REFORMULATING THE PROBLEM IN TERMS
OF COSTING OBJECT**

Work in progress

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Introduction

The introduction of DRG based tariffs in 2004 as a new funding scheme of hospitals in France has led to the development of a series of performance indicators focusing on efficiency: DRG-based costs, budget control exercises, balanced scorecards and performance indicators. These techniques have contributed to deeply frame the behaviour of health professionals (both on the administrative and medical sides). As a result some new organisational forms of care have been put aside although they would improve the performance of the service to the patient. The objective of the paper is to analyse these framing effects of currently used performance techniques on the organisation modes of health services and to identify alternative ways to overcome them and the incentive context that would make them become sustainable.

The methodology used for this analysis includes a series of interviews of clinicians and a collaborative work with some of them in order to identify some key pathologies for which these framing effects can be shown. On the theoretical front we draw from Callon's work on performativity that we apply on performance management models and on MacKenzie's 'generic orientation' of the concept. This leads us to explore the impacts on the hospital reality of the management models viewed as framing socio-technical artefacts. The focus is put on the collective action implying the cooperation of various professions (doctors and nurses, but also administrative staff and in some cases, researchers), which is best summarised by the notion of co-performance (Callon, 2007; Callon, Millo and Muniesa, 2007). The articulation of the expertal knowledge and effective action is used to identify alternative ways of organizing health care procurement in a more satisfying way through an collaborative task forces gathering medical doctors, head nurses and researchers in management. These alternative ways of organizing and providing health care are based on extended clinical paths, i.e. that goes beyond the organizational borders of hospital through professional networking

initiatives.

On the basis of a series of key pathologies the paper first shows how the performance measures based on outputs (i.e. episode of care) build a short sighted view of performance framing behaviours on an restricted conception of health care production and performance. It then describes what alternative modes of health services procurement could be, and why they have no chance to be adopted in the current incentive scheme despite their key assets for the patient. A special attention is granted to the improvement of balancing costs on the one hand, quality and security on the other hand, and the various spatial and time perimeters through which they are measured. An extended conception of performance framework that favours the emergence of comprehensive clinical paths organizing processes is then proposed and discussed. The conditions for their development are finally identified.

Prospective Payment System and Performance Measures: a DRG based Incentive System

We will now precise the way in which performance measures are articulated to the prospective payment system based on DRGs with a short presentation of the newly created French public hospital both funding and governance system. In 2005 the so-called ‘New Governance’ reform is issued, i.e. one year after the implementation of the T2A (‘tarification . l’activit.’, i.e. activity based tariffs), which is a prospective payment system based on tariffs per DRGs that funds the acute care part of the activity of the health care providers, either public or private. The New Governance regulation makes it compulsory for all public hospitals to create the ‘p.les’ that we could translate into ‘pools’ of services, like the clinical directorates in the UK. This means gathering some services in a pool that benefits from some managerial and budgetary autonomy in the hands of the medical director of the pool supported by a head nurse and an administrative executive. These pools have led to structure hospitals in business units making the site evolve towards a divisional structure as defined by

Mintzberg. The official discourse promotes this reform by arguing that what is at stake is to more closely involve medical professionals in a series of decision making processes. This also leads to the creation of a strategic committee including both administrative directors and medical professionals.

The New Governance and T2A reforms are closely articulated to one another in a way by which the first empowers the second through a massive resort to a management model that draws on fragmenting the hospital site into the pools. We propose to qualify this management model as a fractal one. Indeed the model by which the secretary of health which is the centre of the regulation system, considers the hospital sites is the one by which the hospital CEO and his/her staff consider the pools within the hospital, making the structure of the elements of the system and the one of the whole system alike. This choice made by the hospital CEOs can be justified by a series of reasons. Among them there is the fact that this model is a more cautious choice than the one by which they would disconnect the inside from the outside, knowing that the policy of the centre is very difficult to foresee and that the signals sent through the decisions made in the recent years are highly ambiguous; there is also the fact that the professional identity of public hospital CEOs lies in the higher public servant body the mission of whom is to guarantee that the policy of the centre is properly implemented, defining a position that is very far from an entrepreneur's one. Eventually the New Governance reform proves to enable the hospital CEOs to relieve the financial pressure that is imposed on them by the centre on health professionals within the sites via the pools. What is mostly at stake is the profitability of the hospital defined as the absence of losses in the profit and loss account of the site. From 2013 on hospital CEOs will have a part of their wage based on this accounting score.

In order to make these injunctions from the secretary of health performative within hospitals a series of techniques have been introduced inducing new practices. We call them DRG based

performance measures. By this we mean the various financial management practices reporting on performance in hospitals in the perimeter in which the DRG based tariffs funds the health services provider. These practices are mostly focused on efficiency. This especially includes a profit and loss account per clinical directorate that has become a leading device used to report on efficiency and to ask the pool medical director for account in dedicated meetings several times a year. These meetings gather the pool direction and the CEO's staff including the finance director, the human resource management director, and in some case the CEO him/herself. This pool profit and loss account is often complemented by some scorecards with performance indicators. These indicators along with their objectives to be reached are written in the pool contract as part of the contracting in practice launched by the New Governance reform. These indicators are mostly focused on the activity volume of the pool detailed on some cases (i.e. DRGs) to develop over the year period or on the costs of the pool.

We now go on illustrating some implications of the development of these DRG performance based measures that we have selected for their negative framing power on hospital and or health system performance.

Negative Impacts of the French DRG based Incentive Framework

These negative impact illustrations of the development of DRG based performance measures in hospitals results from a series of interviews of medical professionals having developed a special interest in performance management. This had led them to register in a masters programme targeting medical doctors having managerial positions in their public or private hospital in France. In this program we are in charge of the hospital performance management module enabling us to train them and to further develop special relationships with some of them. This has led us to propose to those ones to work collaboratively with us on this research project. The aim of the work was to identify the links between the organisational pathologies that have emerged as problematic recently and the current PPS funding system through which

acute care is now supported via the DRGs. This idea of organisational pathologies was first mentioned by Hall (1976) when he studied the critical situation of a mass circulation magazine. Few years later, Kets De Vries and Miller (1984) proposed taxonomy of five types of organisational pathologies linked to the top management psychological profile. From the social science, Miller and Miller (1991) studied several organizations like army or hospital with an empirical approach and introduced criterias to describe organizational pathologies as an imbalance on variable of a living system and more recently Samuel (2011) elaborate a synthesis on this question. This enabled us to collect a series of key problematic situations exemplifying the limitations of the DRG based funding system and its associated performance measures. At least our purpose is to deal with the question of the role of accounting in enhancing medical activities or on the contrary constraining physician in their professional behaviours. Foucault cited by Rahaman Abu, Neu Dean, Everett Jeff (2010) calls that acting “upon the possibilities of action of other people” (2000, 339). These situations first include three emblematic clinical settings in acute hospital care. In a second stage we will examine the problem of the emergency department capacity and show how it cannot be solved under the current PPS incentive system. In a third stage we will list a series of other problematic features associated to the DRG based measures.

Emblematic Clinical Settings

Two of these case types relate to ambulatory care that constitutes a major challenge wanted by the French secretary of health, knowing that France has a low rate of surgical procedures operated as ambulatory care, i.e. about 35%. The first one exemplifies complex ambulatory care and the second is about non-complex care with patients having complex treatment elsewhere. The third case relates to aortic valve surgery with two therapeutic strategies. It also shows that accounting is a political tool not always strictly coupled to economic concerns which is used in several cases to “structure the possible field of action of others” (Foucault

2000, 339).

Complex Ambulatory Care: the Case of Shoulder Prosthesis

This gives an example of clinical settings that are not currently done on an ambulatory mode (90%), which is required by the health authorities policy to be done by ambulatory care and for which the shift is problematic. We will first present the various stages of the treatment by ambulatory care, then point out the problematic dimensions of the ambulatory care process and finally highlight some key points of the financial perspective.

The stages of the treatment of a patient requiring a shoulder prosthesis by ambulatory care are the following. The patient arrives at the hospital in the morning. He or she has a surgical procedure and analgesia catheter for loco-regional anesthesia. He or she is discharged in the evening. The analgesia treatment lasts three days at least and requires a nurse coming once a day to change balloons. From D+1 the patient needs kinesiology with a well-trained physiotherapist.

What makes the ambulatory care process problematic can be summarised in the following points. First, organizing the outside part of the clinical path is problematic. Especially, the issue is on how to get the required skilled resources outside the hospital at the right time. This situation should be compare with those described along the value chain analysis (VCA) (Shank & Govindarajan, 1992). The top management have to look beyond its own organizational borders and also clearly evaluate added value by their activities in the chain of customer, let say patient. Dekker (2003) precise, in interfirm relationships context, that the VCA is performing when both upstream and downstream actors jointly and collaboratively conceptualize it. This require to share both cost and performance information between partners.

Second, coordinating and managing the health professionals and coaching the patient (i.e. guiding, educating and informing him or her) are less easy to achieve successfully than within

the hospital. Third, costing issues are made more difficult since there are a series of successive interventions in and out the hospital. The costing back office work is hence more complex. Eventually managing the performance of the global clinical path beyond the organizational borders proves to be complex.

From a financial perspective, the current length of stay for such a clinical setting is 3 days in acute care, which draws back to the comparison of the DRG revenue and cost. After the discharge the kinesiology is currently paid by a tariff per procedure.

This kind of situation allows us to go deeply with the general tension observed by Rahaman Abu, Neu Dean, Everett Jeff (2010, p. 1120-21) “that exists between maintaining tight financial control and maintaining the continuity of the campaign”. The political side would like to drive funding cautiously and the field need mooney to do care for the population. In our case, physicians are not facing a risk of financing disruption at present but when the Ministry of Health would like to promote treatment guidelines implicating coordination throughout the hospital all actors and in particular those who are accountable for the quality of care are “accounting and skilled disarmed” in fact.

Ambulatory Care with Complex Treatment: the Case of Inguinal Hernia

The inguinal hernia provides a nice illustration of clinical settings eligible to ambulatory care that are not done as such because of a complex treatment like anti-coagulant. This is the case for patients over 70 with auricular fibrillation antecedent that imposes to put them under anti-coagulant treatment.

The stages of the treatment under in-patient care are the following. The patient arrives at the hospital in the morning. He or she gets the surgical procedure and shifts from oral anti-coagulant to anti-coagulant by injection. The discharge that can be expected in the evening is then delayed because of the transition phase that lasts 3 days to get back to the oral anti-coagulant treatment requiring medical monitoring. The problematic dimensions of the

ambulatory care process in this case are of the same nature of the preceding case. Once again the outside part of the clinical path is difficult to organize and what is at stake is to get skilled resources outside the hospital at the right time. In this case this means to get a well trained medical doctor with treatment balancing competences and a nurse to make the injection twice a day. The second problem of the preceding case is also present here, i.e. coordinating/managing the health professionals and coaching the patient. In this case this includes the appointment to the laboratory for the anti-coagulation exams. Costing the successive interventions is also more complex and the back office work more difficult since it involves various entities of the care chain. This situation suggests to explore “One way to achieve such integration is to refocus attention on control problems rather than on control solutions. This is the perspective adopted by contributors in disciplines such as organizational economics, organization theory and strategy, which have drawn on different theoretical domains to define the control problems typical of inter-firm settings.” (Caglio Ariela, Ditillo Angelo, 2008, p. 891)

In terms of finance the current length of stay for such a clinical setting is 3 days in acute care for a DRG revenue that is the same for in-patient and ambulatory care.

Aortic Valve Surgery: Two Therapeutic Strategies

The third clinical setting is slightly different in nature from the two preceding and it gives us an interesting case of accounting technologies of governance (Miller and Rose 1990, 8) where the accounting model or what Dean (2003) calls an accounting regime of practice to guide the professional activities.

The aortic valve gives an example of clinical settings for which a shift towards a new technology would be better in terms of quality of care and/or risk for the patient, and possibly in terms of efficiency at the global level of the integrated care perimeter, i.e. beyond the hospital borders. We also see how the accounting and administrative practices allow to

coordinate, control and disciple the medical field. So the choice is between two strategies. The first is the current technology, i.e. the surgical valve replacement. The second lies on an alternative practice, consisting of implanting a transcatheter aortic valve for a percutaneous replacement. In the first strategy the stages of the treatment are the following. It involves a cardiac surgery with extra-physical blood circulation, then a stay in the intensive care unit for 36 hours and then several in-patient days in a clinical unit. This last 10 days, to which 10 more days in a rehabilitation unit must be added. The alternative strategy includes 5 in-patient days because there is no external body blood circulation, and hence no ICU stay; then 8 to 10 days in a rehabilitation unit. In terms of patient security this second therapeutic strategy is superior to the first one: the risk of getting a cerebral vascular attack is lower and the outcome is better with a shorter length of stay and a better chance to avoid complications and subsequent rehospitalisations.

The problematic dimension of the shift is the financial dimension. In terms of revenues the first strategy requires ICU stay and the DRG based revenue. The cost of the current strategy includes the surgical valve (4.000 €) and the wage of high skilled staff for the duration of the first stage (10 days) coming on another budget. This has to be compared to the cost of the alternative catheter based practice which is of 20.000 € because of the early stage of spread of the technology.

Trouble comes when our data enter in resonance with Ghanaian HIV/AIDS campaign where researchers observe the discouragement of actors in implementing emergent health issues, changing their sequences in health practices and sometimes disrupt the continuity of the field activities. Rahaman Abu, Neu Dean, Everett Jeff (2010, 1114) notice that it may happen when *“the introduced controls did not leave sufficient space for local knowledge and initiative”*. This encourages us to explore partial and incomplete settings of gouvernance in healthcare field specifically linked with de Prospective Paiement System aim (Preston et al. 1997) and

also the aspects of standardization and commensuration of the hospitals (Llewellyn and Northcott 2005). This should give us the opportunity to imagine alternative tools supporting political concerns not only focused on efficiency but also on efficacy and acute care. These situations suggest overcoming the DRG representation of care and going through institutional boundaries and introducing health as a whole view of care in the governance scheme.

Other limitations of the DRG based incentive framework

The Emergency Department Overbooked: is it a problem?

In university hospitals located in big cities the emergency department is often overbooked welcoming two times to three times its expected capacity. More generally the number of people discharged by Emergency Departments (ED) in France is dramatically increasing: in 2008 those patients were 18 millions i.e. 2,5 times more than the 7 millions of 1986 (Mallot, 2010). This trend has already induced dramatic situations in the recent past, when heat waves occur like in 2003 or epidemics of flu. Not only this overbooking results in poor public health performance but it is also much more expensive in usual times. Some less costly alternative solutions targeting the 80% of the patients visiting the EDs who are not true emergencies, are regularly put forward. Nevertheless emergency departments have gone on experiencing a continuous increase for a number of years. Let us have a look on the way the EDs are financed. The current incentive scheme based of T2A reform funds this activity by allowing the unit fees per patient visiting the department. The revenues of the department is hence directly linked to the number of patients coming in even if it is not for relevant motives. In such a case there is a sort of consensus between the unit and the strategic apex of the hospital to which it belongs. This consensus leads to not look for effective solutions reducing the number of patient visiting the unit. Unfortunately this consensus may question the social achievement of EDs and the role of accounting will be in contrast with the aim, one important challenge consist in designing the relevant financial control (Rahaman Abu, Neu Dean, Everett Jeff, 2010).

Ethics and Cost Management

Other limitations relate to ethics and are induced by the pressure for efficiency imposed on hospitals and health professionals by the T2A logic. Here is an enlightening example of such situations.

A medical doctor leading the committee in charge of the in-hospital operating theatre acquired infections analyses the increases of the score that overcome four times the national average and look for solutions with his team.

The problem concerns 50 patients per year and implies for them dramatic consequences in term of quality of life and employability. He comes up with a plan for action and an 8.000 € budget for it and submit them to the management control department. The finance people returns to him saying that the costs of his plan is not only 8.000 € because it also includes the loss of revenues corresponding to the rehospitalisation of the 50 patients suffering from the in-hospital acquired infections that are especially profitable DRGs. Eventually the plan has not been implemented and the medical doctor and his team feel very upset and angry...

Here we observe slightly the same situation where health professionals become to act as accountants. They divert one part of their own and team time from core professional work in order to deal with requirements of the financing process. In doing this, they also put individual forces to undertake an activity for which they do not have the technical skills. Further, we see that strategically few actors are completing their task in order to maximize the level of funding ressources received for their organization, in some cases, health prevention and treatment activities are both changed to improve the amount of prospective financial ressources. Over these accounting issues for health professionals, we are still wondering about the long term impact on the human hospital organization and the motivation of differents teams to collaborate if the T2A rules provide antagonist approach of the mission of the hospitals for health. In an analogue situation, Rahaman Abu, Neu Dean, Everett Jeff suggest

that “*these aspects of accounting in action (Burchell, Clubb, Hopwood, Hughes, and Nahapiet 1980; Hopwood 1987) that a governmentality perspective helps us to understand and analyze*” (2010, p. 1099). They exemplify this, since accounting is used to discipline one partner who is not playing the rules of the game, a financial report could be re-audit for inadequacy with delayed fundings in idea to align actor behaviors.

Examples of therapeutic decisions in Oncology influenced by the T2A scheme

Interviewing health professionals on the structuring effects of the T2A we ask them the following question: "what do you do differently because of the T2A tariffs?". Here are the key points that were underlined in their answers. In chemotherapy treatments the vein administration way is the only valued one to the expense of the oral administration way. Even though it required a nurse to educate the patient and warn him/her on the risks to be avoided, even though the oral way is much more comfortable for the patient, the oral way is not used that often by the doctors, the interviewed oncologist admits.

Another case is the location where the chemotherapy takes place, i.e. in the hospital vs at the patient's home. In case it is at home the hospital does not get the same revenues and the practice is hardly developed.

In palliative care the compulsory ethical committees highlight that the length of stay is sometimes shorter than required to solve the whole range of pain issues of the patient when he or she is at the terminal stage of his/her life. In case of chemotherapy treatment that are complementing the surgical procedure like in breast cancers, the same amount of chemical substance can be given to the patient in 6 times or in 18 times dividing the amount by time (cure). Even if there is no definite evidence that it is better for the patient to have the treatment in an extended number of cures it is the solution adopted. Indeed the revenues raised by this option are much higher than the first one since the hospital receives DRG fees as many times as the number of episodes of care (cures).

In blood transfusions 3 globulus balloons are not injected at the same time because it is not profitable. Rather two balloons are in a first stage and then a third one is given the day after. Another reason for frustration for medical doctors is the fact that the consultation in oncology or in palliative care is no more valorised by the T2A tariffs. There is consequently an incentive not to follow up former patients having already come for palliative care, because they take the time of a new patient that will generate much more revenues via the chemotherapy treatment he/she will be given, that is very profitable. The interviewed oncologist adds: "The practices can be variable from one hospital to another and you can find patients in palliative care being given chemotherapy" (while there is no need since he or she is no longer curable).

All these professional adjustments trying to resist to the funding rules exist in several context and sometimes it exceed the individual professional accountability. In the HIV/AIDS campaign in Ghana, some NGOs engage people specialized in funding proposal writing with the idea of maximizing their financing allocation. Unfortunately, this drives them to candidate on action not necessarily prioritized or on certain segment areas where there are not consistent with their core competencies (Rahaman Abu, Neu Dean, Everett Jeff, 2010).

Other limitations of the DRG based scheme: a lack of visibility of the incentive

One of the main problems for hospital managers is the instability of the DRG based revenues. There is no way to forecast what they will be the following year. The last version of the hospital financing model included 600 DRGs and we shifted to a new one with 2300 cases in 2009.

When trying to evaluate the impact of this new version on the hospital financial resources, some patient stay revenues decrease up to 20%, with amazing examples of patient generating 69% less from the DRG version 10 to the 11 (Moison, 2009). These cases illustrate the result of a comprehensive analytic work of the system that shows similar phenomena at the patient

level but also the department and hospital levels. Beyond the tariff setting process that is updated every year impacts on organisational and individual behaviours resulting in some problematic outputs coming out from the adaptive adjustments from the providers. Immediate consequences include the difficulty to plan, to compare data between years also at the hospital level and directly in departments and services. For a given medical clinical directorate, forecasting may be completely impossible since the financing rule changes are not yet known. This raises a question of legitimacy for the management control department facing medical doctors. Indeed how to justify an important decrease of the department revenue if the calculation of it is opaque since processed by “a big and sophisticated scientific system able to determine costs per DRG with an acceptable precision which funds tariffs”?

The adaptive strategies developed by actors include the 'optimization of encoding'. This consists in trying to encode the episode of care by classifying it in the more profitable DRG through reporting such and such comorbidities associated to the main diagnostic, or by trying to control and monitor the length of stay with the clear objective of reducing the boundary effects. On another hand, the main results observed in terms of costing control concern purchasing and logistic activities. Hospitals may now have a comprehensive set of management control tools promoted by the health authorities. This especially includes a clinical directorate "Profit and Loss Account" (CREA in French); the so-called “Table of Casemix Costs” (TCCM in French). Even for hospitals having developed such techniques and practices it is very difficult to understand and explain causes of any variation: huge complementary studies are required (Pepin M., Moisdon J.-C., 2010).

Another challenge is for the hospital information system to trace the resource consumption to the output, i.e. the DRGs. The signals given by the DRG model remain too ambiguous, uncertain, obscure, to be really source of changes. This is concretely in opposition with one of the major objective aimed by the DRG financing system: encourage hospitals to be more

efficient (Pepin & Moisdon, 2010). This is reinforced by the results of surveys showing that some hospitals require four times more medical time for the same DRG revenues and day cases or beds; that in Emergency Departments the cost of an emergency line for 5000 patients may vary from 16 K€ to 200 K€ (Mallot J., 2010). This claims for a better information system linking resource consumption to DRGs.

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