COST CONTROL OF MEDICAL CARE IN PUBLIC HOSPITALS – A COMPARATIVE ANALYSIS

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Abstract

Background. Some Polish hospitals are in a good financial position but others are not, even though they are of a similar size according to their budgets, the number and structure of specialists and type of society they serve. Furthermore, it is difficult to find the factors responsible for their different financial standing. To investigate deeper the dissimilarities that might exist, the author hypothesizes that one of the most important factors that possibly influences a hospital's financial performance is its control system.
Research aims. In these circumstances the research is aimed at identifying different control areas and mechanisms which have been used by hospital managers to ensure delivery of high-quality cost-effective patient care and that concurrently balance the hospital budget.
Method. During the study the author investigated the operating core of hospitals in order to develop a deeper understanding of its internal control processes. This qualitative study is based on several in-depth interviews with general directors of two similar hospitals.
Key findings. The research indicates that hospitals ought to concentrate on four generic areas of control: input control, legitimacy of medical procedures control, revenue control and overheads control. Thus comparing the studied hospitals according to their activities in the four control areas it is visible that the hospital which has a good financial situation, takes control measures in all four areas, and the top managers are directly involved in supervising most of these activities. While the hospital which is facing financial difficulties, is much less active in the described areas of control and the director does not participate actively in control of the lower levels of his organization nor does he build such extended control mechanisms as the director from the better-off hospital.

Keywords: Control, Health care, Hospital, Model, Cost-effective

INTRODUCTION AND BACKGROUND

The change of hospital financing from budgetary to the Prospective Payment System (PPS-DRG) influenced the allocation of health care resources and regulated the lives (and deaths) of citizens in a highly indirect and decentralised manner (Abernethy et al., 2006). This change has redefined the issue of health from a social to a budget-deficit one. Health treatment is no more a medical concern exclusively belonging to doctors but an economic issue within the jurisdiction of economists, managers, financiers, accountants and government agencies (Chua & Degeling, 1993, Lewandowski, 2011a). This has focused the public and scientific debate onto efficiency and effectiveness. Hospitals in Poland are now enterprises playing on a more and more competitive market and they must put emphasis

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on cost reduction and increase revenue which demands more business-like management.

In Poland, since the introduction of the universal health insurance system in 1999 together with the performance based hospital financing scheme and later in 2008 the JGP (the Polish version of DRG – Diagnosis Related Groups), there has been no proper evaluation of costs of different health procedures. The result is that some medical procedures like cardiology are overfunded and some, like rehabilitation, are underfunded (Lewandowski, 2011b). According to this payment distortion, hospitals are struggling with balancing their budgets by transferring costs between medical departments. This inequality seriously affects the hospitals' performance management systems as it is not clear for what reasons results are good or bad. But looking at Polish hospitals one can conclude that some are in good financial positions and others not, even though it is difficult to find factors differentiating them. These hospitals have similar budgets, a similar structure of departments and specialties and they serve similar societies. To investigate deeper the differences that might exist, the author hypothesizes that one of the most important factors that possibly influences a hospital's financial performance is its control system.

In these circumstances the research is aimed at identifying different control areas and mechanisms which have been used by hospital managers to ensure delivery of high-quality cost-effective patient care within different subunits and to ensure optimal revenue from the payer to balance the budget. During the study the author is going to probe the operating core of hospitals in order to develop a deeper understanding of its internal control processes.

In this study a qualitative method of research has been applied since systems of control, interdependency among health care units, specialties and supporting activities in hospitals are still poorly understood. Therefore, a quantitative approach would have suffered from not knowing exactly what to measure.

Concepts of Control

The most straightforward definition of control relies on checking whether the result is consistent with previously adopted standards (Adamiecki, 1985; Zieleniewski, 1972), and in early research, control in organisations was understood according to Weber (1947) as a problem in creating and monitoring rules through a hierarchical authority system, which could be interpreted as a cybernetic process of testing, measuring and providing feedback. It was regarded predominantly as an administrative or bureaucratic process. Koontz and O'Donnell (1969) pointed out that control should be linked to planning, and they claimed that at this stage future control should be predicted.

In this research, control is understood as every activity aimed at checking the effectiveness of the organisation. Its task is to enforce submission to the demands of the organization in order to achieve its ultimate goals. This paper is concentrating mostly on the processes influencing hospital financial performance.

METHOD

Research Instruments and Data Collection

The study is based on seven in-depth interviews with general directors of two public hospitals (SPZOZ) from March to September 2012 (four interviews with the director of hospital 1 and three of hospital 2). Both directors are physicians. The hospitals were chosen based on their similarities. Both of them have around 600 beds, one hospital has 16 and the second 17, mostly surgical, wards. Each has an emergency room and several other medical and non-medical departments. The hospitals employ around 900 people each and have similar budgets, 125 million PLN and 130 million PLN respectively. They are typical, highly specialized, regional hospitals. The main difference is that one of them is in a good financial situation, generating profit, but the second one has problems with covering its costs, showing matured payables. Even though both hospitals had financial problems at the beginning of 21-st century, the first hospital has been able to recover.

The interviews were based on a semi-structured questionnaire developed to serve as guidance for the data collection from the two hospitals. Interviews were recorded using digital equipment, before being transcribed and analysed.

RESULTS

There are many similarities between the studied hospitals on the operational level. Both hospitals carry out an analysis of costs and revenues generated by individual departments through weekly and monthly management briefings. Both directors are managerially oriented, despite their medical background, and they believe that managerial control is important. During recruitment processes for medical department heads, special attention is paid to the candidates' approach to cost control. Both hospitals are delivering high quality care and are also certified according to the Polish Centre for Monitoring Quality in Health Care in Cracow.

Hospital A – Continuous Pressure and Management Involvement in Control

According to the director, not only costs should be controlled, but also revenue must be very closely monitored. And it is not merely the number of admitted patients, but also a record of performed medical procedures.

> The failure of not including any ICD-9 procedure or using the wrong ICD-10 code in the settlement [in the report to the Payer] results in a performed medical service being classified within the lower-priced JGP group, a very common error, (...)for patients with multi-organ injuries, such mistakes can cost several thousand zlotys for each [as a loss of revenue].

To prevent erroneous reporting to the National Health Fund-NHF (in Polish: Narodowy Fundusz Zdrowia-NFZ) the director introduced new managers to the organization, who are involved in the current analysis of the department's costs and revenues. Specifically they monitor the costs of treatment and consistency of the reports on delivered services at the level of individual patients to the payer, namely the NHF. The director states that:

> The system of managers works. Often, even the heads of departments do not know that they have a problem, but I already know, for example, that the patient could not be settled properly in her or his department and should be moved to another one.

When the hospital exceeds the value of the contract signed with the National Health Fund, it must refuse admission of patients as NHF usually only pays extra for life-saving procedures. Thus, all monthly procedures delivered over the limit of the contract are analysed in terms of possibility of their reimbursement. Therefore, in the hospital patients are divided into three groups: (a) elective, (b) urgent, and (c) instant. The elective patients are those who can wait for their treatment without any risk to their life, e.g.: hip replacement, cataract surgery. They are registered on waiting lists. Urgent patients are those who should be treated in the near future, but can wait, even though waiting for treatment is bound to come with some risk of deterioration to their health. These patients mostly suffer with exacerbation of a chronic disease. Patients who have to be treated immediately, like with heart attacks or after accidents, are called – instant.

> Urgent patients can be steered! Urgent patients also can be subject to a queue system, and about the time of admission the medical criteria should be decided on, the severity of the disease and what the patient's symptoms are that day. Patients can be provided for in the emergency room, and it pays to give them a drip or other treatment, but not to increase the amount of services over the contract [with NHF], because we do not recoup these costs [from NHF].

However, a major problem with the steering of urgent patients, i.e. sending them back to their home to wait for admission to hospital, is the

fear of the doctors' responsibility associated with an incorrect assessment of the patient's condition and making the wrong decision. Thus, the introduction of a strict monitoring policy of services performed over the limit of the contract with the NHF protects the hospitals from admission of patients for whom it will be difficult to recoup the money, but this may generate additional costs in other areas.

> Sometimes, in order not to admit patients to the hospital, doctors will order expensive tests or call consultants from other departments who, in turn, expand diagnostics [looking for an excuse to call another consultant] to shift the responsibility to another specialist. Some emergency room doctors do not want to take responsibility for patients – it works poorly in all hospitals.

In addition to medical reasons, an important factor that makes it difficult to control patients admission are emotions that sometimes lead to conflicts in the admission room and deteriorates the opinion about the hospital. However, the director of the hospital claims that:

> The art of steering the patients one needs to learn, patients can be rejected and they will complain or sue [the hospital] or will have a high level of negative emotions, but [also] may be delighted and thank the hospital. (...)it is a matter of culture, attitude and responsibility of the patient. You have to know how to approach the patient, ethically, medically, with the interest in their disease

To reduce anxiety level in doctors and patients, in case of refusal of admission, the director is planning to introduce a patients' monitoring system based on technical means, such as telemedicine.

> Already at present, emergency room employees call 'urgent' patients from the waiting list to ask about their health, whether they monitor their blood sugar, or if they have enough drugs, or if they are in touch with their GPs.

When asked about external factors that significantly affect the functioning of the hospital and have a negative impact on its financial standing, except the method and level of financing, the hospital director responded unequivocally:

> General practitioners and small private primary care providers lack the knowledge of the system and focus only on their contracts. (...)GPs often send patients to the hospital and not to a specific department. (...)One GP has written on his referral: "to the department of surgery, gynecology or internal medicine". (...)Primary care doctors do not diagnose patients adequately, since they do not know where to direct them. (...)This means that patients sometimes go to the hospital too late. (...)or they [GPs] direct patients who can be treated on an ambulatory basis.

The hospital introduced special trainings for primary care physicians and invites them to various conferences. The hospital doctors are also encouraged to contact primary care physicians in order to improve cooperation.

> It's about improving the input. (...) As a result of the lack of GPs professionalism, poorly directed patients come to the hospital, which is neither instant nor urgent, and the services performed pushes the budget over the limit, for which the hospital does not recoup the money, therefore these patients generate costs.

He describes the situation when he received the hospital formulary for approval. He believed that many drugs could be replaced by other less costly ones, but he lacks the appropriate arguments to convince doctors. After some negotiations with the Therapeutic Committee few a amendments were made, which lowered the costs, but he was not fully satisfied with the results. Therefore, after some time, the director asked an external expert with high authority from the other end of Poland, from the Department of Clinical Pharmacology, for an opinion on the hospital formulary. The expert came to the hospital already with preliminary observations, conducted training for medical, nursing and pharmacy staff, met with the Therapeutic Committee and introduced further changes to the formulary to lower the costs while maintaining or even improving the quality of treatment.

> During the meeting with the Expert and the Therapeutic Committee I felt like on a pharmacology seminar, but I lowered the costs. (...) Not right away, not alone, I had to support myself with tools, but I have achieved the effect.

Hospital B – Professional Self-Regulation

The hospital is analysing costs and revenues for each department on a monthly basis. Overhead costs, concerning management and administration are allocated to the departments at a fixed rate. In other words, for each department the same share of costs is allocated no matter how many beds or patients or employees it has or what revenue it generates. The director of hospital B also considers cost control as a very important part of his work and cost control is an important issue when a new head of department is appointed. However, heads of medical departments are left with a large degree of freedom, especially that:

> Heads of the wards have worked in their positions relatively long, sometimes more than twenty years now. I know what I can expect from them, and who can surprise me. (...)We have known each other more than twenty years now.

Cost analysis has been carried out in the hospital for more than ten years, the director said that in the beginning they were a lot of emotions associated with it, now most of the physicians accept it. Heads of departments are only occasionally trained about costs analysis, e.g. when there are some external training programmes.

> Cost analysis is knowledge that doctors do not want to deal with, (...)but [for some time] they have already showed a little interest. At least the heads of departments. Because physicians in the wards(...), it still happens differently.

The director is claiming that the most difficult problems for his hospital are services performed over the limit of the contract with the payer. He believes it could be controlled but only at a minimum level. The director does not introduce any system solutions in this area, although he sometimes intervenes. For example, when one of the departments began to exceed greatly its contract, the director stopped the purchase of materials needed for elective surgery.

> There I have applied manual control. I had just cut the budget for the materials by half. (...)This eventually resulted in the waiting list being lengthened. Because, immediate surgery, anyway, they have to do, there's no discussion. (...)For immediate surgery I provided materials, but for the elective one well, I just cut the budget.

When a department begins to show increased costs, the director, or his deputy do not analyse the causes in detail, such as applied diagnosis, treatment procedures, pharmacotherapy, and correctness of the settlement, etc. The director asks the head of the respective departments to analyse the causes of increasing costs and to find a solution.

> I try not to interfere too deeply.

DISCUSSION AND CONCLUSIONS

Significant differences in the approach to control could be observed when analysing the results of the qualitative research conducted in two similar hospitals with fundamentally diverse financial situations.

The important difference is that in hospital A, which during last few years has been achieving profit, three managers who directly report to hospital director and are responsible for control and coordination have been introduced. In addition, the director of hospital A is engaging more intensively the problem of medical activity control than the director of hospital B, which for many years has been reporting losses.

Table 1 shows areas of control identified during the study. The first significant difference between the two hospitals could be detected at the level of emergency rooms. In hospital B patients are selected into two groups, some are taken immediately to the hospital, and the others, after some treatment, are regarded as the elective patients and register on a waiting list or are sent to their GPs without any further medical activities planned. While in hospital A, the group of patients who must be admitted, is further divided into two subgroups: the so-called "instant" patients that must be immediately admitted, with such problems as a heart attack, and "urgent" patients who may wait some time for hospital treatment.

Table 1. Comparison of Scopes of Control in Both Hospitals

Scope of control	Control within the hospital ward/emergency room		Additional managerial control		Control of Managing Director or the Deputy	
	Hospital A	Hospital B	Hospital A	Hospital B	Hospital A	Hospital B
Control of the number of patients admitted to the emergency room by their classification into 3 groups: instant, urgent and elective;	X					
Monitoring of urgent patients by telephone at home;	X					
Monitoring of the patient's admission to the ward based not only on medical requirement, but also on the possibility of optimizing the settlement;	X		X		X	
After extended diagnostics in the ward and the establishment of a treatment plan, another control of the possibility of optimal settlement according to the JGP*, eventual transfer of the patient to another unit if there is possibility of a more favourable settlement;	X		X		X	
Control of applied diagnostic procedures and drugs consumption within the ward in terms of its necessity in the treatment process;	X	X	X		X	
Control of settlement – assignment of procedures delivered to the patient to the appropriate JGP* group – the completeness of reported ICD-9 procedures and the correct ICD-10 qualification;	X	X	X		X	
Control of the number of elective patients admitted;	X	X	X		X	
Control of the type of performed elective procedures in terms of balancing the cost of revenues;	X		X		X	
Control of ward costs;	X	X	X		X	X
Control of the possibility of obtaining the payment from the payer for patients treated over the limit;	X		X		X	
Hospital Formulary – control of the use of less expensive alternatives of pharmaceutical or generic drugs;					X	
Training of primary care physicians on how to properly diagnose and classify patients for hospital treatment;	X				X	
Regular training of medical staff according to cost control					X	

* (Polish version of DRG – Diagnosis Related Groups)

Source: own elaboration.

The health status of the "instant" patients waiting at home for admission is monitored on the telephone by employees of the emergency room.

The research has not established whether the division of patients into the "instant" and "urgent" groups has a significant impact on reduction of the number of medical services that remain unpaid by the payer. The director of hospital A declares that by this action the hospital is able to recoup the payment for most services over the limit of the contract with the payer in cases of lawsuits. Another area of control present only in hospital A is the search for the best possible settlement options for planned medical services before starting the treatment. This allows the delivery of services on the ward, which makes it possible to obtain the highest payment under the contract with the payer.

In hospital B there is no control over the elective admissions of the patients in terms of their profitability. However, in hospital A, the cost-intensive elective services are planned in such a way as to offset the unprofitable procedures by the profitable ones, for example excessive cost over the income for hip replacement surgery is covered by a more cost-effective spinal surgery.

In addition, the "profitable" hospital makes efforts to influence the flow of patients coming into the emergency room, through organizing trainings for primary care physicians concerning issuing referrals to the hospital. On the other hand, the hospital regularly conducts analysis of the number of services performed over the limit, whether it would be feasible to recoup payment during the judicial process. In other words, the hospital provides services over the limit only in a life preserving situation or when non-treatment may have a negative impact on the patients' health, and thus there is a high probability of the reimbursement of incurred costs.

According to the study, four generic areas of control could be indicated:

1. Input control, associated with the appropriate selection of patients: (a) control of the selection in the emergency room of "instant", "urgent" and "elective"; (b) training of primary care physicians on how to properly diagnose and classify patients for treatment; (c) control of the cost-revenue balance of elective patients;
2. Legitimacy of medical procedures control during the process of care: (a) consumption of drugs, in terms of treatment process – its necessity; (b) necessity of applied diagnostic procedures (oversupply avoidance);
3. Revenue control: (a) control of completeness of reporting to the payer; (b) control of the possibilities of the optimal settlement depending on the department (medical specialties), in which the patient could be treated; (c) control of the possibility of obtaining payment from the payer for patients treated over the limit in a lawsuit;

4. Control of the overall hospital costs, including: (a) cost of drugs and other medical materials – focusing on the use of lower-cost substitutes and on negotiating lower prices from suppliers; (b) downward pressure on the reduction of costs of employed staff, maintenance of medical equipment, cost of capital, etc.

These mentioned areas of control indicate that not only does cost control have an impact on the financial situation of the hospital, but also the appropriate selection of patients at the stage of admission, monitoring of optimal compensation from the payer and control of applied diagnostic and therapeutic procedures (Figure 1).

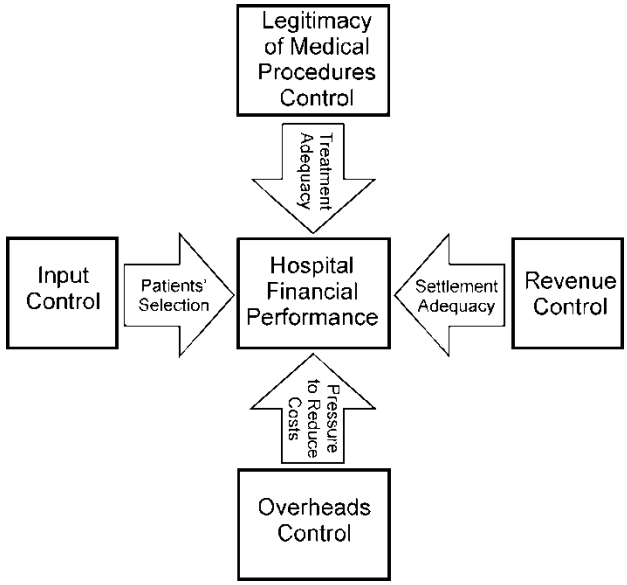

Figure 1. Model of Medical Activities Control Within the Hospital

Source: own elaboration.

The overall conclusion is that hospital A, which has a good financial situation, takes control measures in all four areas, and where the top management are directly involved in supervising most of these activities. Hospital B, which is facing financial difficulties, is much less active in the described areas of control. The director of hospital B does not participate actively in control of the lower levels of his organization and has not built such control mechanisms as with the director of hospital A through the introduction of additional managers.

Particular attention should be paid to the control of the input – the selection of patients for hospitalization. On the one hand, such a strict procedure can evoke negative social emotions, but on the other hand, the payer protects the budget against negative healthcare market phenomenon

such as supply-driven demand (Porter & Teisberg, 2006), paying a lower rate or enforcing claims for the services performed over the level of the contract before the court.

In these studies hospitals have not been compared in terms of their level of costs nor their activities within other management functions. It cannot be clearly stated whether the better situation in hospital A is the result of more developed control. It also cannot be excluded that more extensive control is not the most important factor leading to the financial success of hospital A. In order to clearly resolve these concerns, further research in this domain should be carried out.

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KONTROLA KOSZTÓW OPIEKI MEDYCZNEJ W PUBLICZNYCH SZPITALACH – ANALIZA PORÓWNAWCZA

Abstrakt

Tło badań. Niektóre polskie szpitale są w dobrej sytuacji finansowej, a inne nie, chociaż mają podobne budżety, liczbę i strukturę oddziałów oraz funkcjonują w porównywalnym środowisku społecznym. I trudno jest znaleźć czynniki odpowiedzialne za różnice w ich sytuacji finansowej. Aby zbadać głębiej istniejące różnice, autor zakłada, że jednym z najważniejszych czynników, który może mieć wpływ na wyniki finansowe szpitali jest funkcjonujący w nich system kontroli.

Cele badań. W tych okolicznościach, badania mają na celu zidentyfikowanie różnych obszarów kontroli i mechanizmów, które były używane przez menedżerów szpitali, aby zapewnić dostarczanie wysokiej jakości efektywnej kosztowo opieki nad pacjentem i zrównoważenie budżetu szpitala. Podczas badań autor dociekał istoty funkcjonowania szpitali na poziomie operacyjnym w celu lepszego zrozumienia procesów kontroli wewnętrznej.

Metodyka. Przeprowadzone badanie jakościowe opierają się na kilku pogłębionych wywiadach z generalnymi dyrektorami dwóch podobnych szpitali.

Kluczowe wnioski. Badania wykazały, że szpitale mogą koncentrować się na czterech głównych obszarach kontroli: kontroli wejścia, kontroli zasadności stosowanych procedur medycznych, kontroli przychodów i kontroli kosztów ogólnych. Porównując badane szpitale pod względem podejmowanych przez nie działań w wymienionych obszarach kontroli widać, że szpital, który ma dobrą sytuację finansową, podejmuje działania kontrolne we wszystkich czterech obszarach i menedżerowie są bezpośrednio zaangażowane w nadzór większości z tych działań. Podczas gdy w szpitalu, który doznaje trudności finansowych, jest znacznie mniej aktywny w opisanych obszarach kontroli i dyrektor nie bierze czynnego udziału w kontroli niższych poziomów swojej organizacji, ani nie zbudował takich rozszerzonych mechanizmów kontrolnych jak dyrektor szpitala o lepszej sytuacji finansowej.

Słowa kluczowe: kontrola, opieka zdrowotna, szpital, model, efektywność kosztowa