

# Causes and sources of hidden costs in a medical facility

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## **Abstract:**

The aim of the following article is to analyze the sources and causes of hidden costs, based on the example of a healthcare facility. Measures reducing the levels of these costs were pointed out. Hidden costs are a result of an insufficient quality of services and processes. They are caused by poor management. They do not have a direct reflection in the enterprise information system, the reports provided by the accounting system, they are not included in the budget or in the accounts. In order to formulate a definition of hidden costs, an analysis of literature was conducted. It was followed by structured interviews with hospital staff. They were used to diagnose the sources of hidden costs and to determine their causes. The analysis of the hospital's records was to verify the findings and conclusions of the author. Results. The origin of hidden costs and management decisions made to reduce the causes of hidden costs in a healthcare facility.

## **Key words:**

Hidden costs, Healthcare facility, Quality, Hospital

## Introduction

Measurement and analysis of costs are performed in every company and institution. It is a natural phenomenon dictated by legislation and by the need to evaluate the business' efficiency. Costs as an economic category are recognized and then analyzed in various systems of registration. The reasons for their formation are both the usage of a variety of resources and the implementation of action (here you need to consider the traditional definitions of costs, as well as the modern approaches of cost accounting's views).

A thorough analysis of the effects of the activities of a particular entity leads to the conclusion that it is necessary not only to measure the visible costs arising in connection with the typical statutory activities, but also to measure the so-called hidden costs.

It appears that the search for savings and, at the same time, methods of reducing costs emerges as a matter of primary concern. Therefore, the *sources* of costs are also being examined. Taking a hospital's case as an example of study, this article focuses on the analysis of sources and causes of hidden costs which are not directly reflected in the profit and loss account. The detection of sources that generate hidden costs associated with both medical and non-medical activities occurs most frequently during the implementation of corrective actions. It is the time during which employees, for the sake of the common good, often reveal irregularities which cause the formation of such costs.

The global crisis has forced many companies operating in the market to look for potential savings. It appears that all undertaken action aims at cost-cutting; savings are often achieved through reducing the number of jobs, renting of unused space, or through the sale of expendable assets. As part of restructuring which has taken place in almost all Polish unprofitable hospitals, either unnecessary processes are being eliminated or process costs are being reduced. In such cases, the emphasis is put more on the analysis of the processes and the reduction of their costs rather than on introducing changes and innovations. The performed analyzes concern not only the costs, but also aim at indicating the sources of costly resources and processes.

### 1. The notion of hidden costs in literature

Literature provides evidence for the existence of hidden costs in numerous areas of companies and institutions' activities. It also contains several examples of their identification and analysis. The issue of hidden costs is particularly undertaken in the studies of economy, management and health sciences. Discussions about the nature, identification, measurement, analysis and reporting of these costs have been described in detail in the works of H. Savall, V. Zardet, M. Bonnet, M. Péron, M. W. Kim and W. M. Liao (Sellés, Rubio & Mullor, 2008 ; Kim

& Liao, 1994). The French scholars prove that the existence of hidden costs is a common phenomenon affecting various businesses (Savall, 1987 ; Savall, 2010 ; Peron & Savall, 2007, Buono & Savall, 2007).

Hidden costs are mainly the result of insufficient quality of services and realized processes. They are also defined as a result of poor management. They arise as a consequence of risk taking, as well as the failure to take risks. Hidden costs may arise during the implementation of primary statutory activity, but also as an outcome of unforeseen events. The idea of hidden costs is often narrowed down to the so-called hidden costs of quality. It is certainly a broader category than the category of costs of the lack of quality, which is examined in the works of Savall, Zardet and Bonnet, among others (Savall, Zardet, Bonnet, 2008 ; Savall & Zardet, 1987 a, b). The scholars define hidden costs as those not having a direct reflection in the company's information system, the reports provided by the system of accounting (financial and managerial), and not included in the budget or the accounts. The authors emphasize that hidden costs are associated with insufficient quality and represent a gap in productivity. They frequently result from employee non-attendance, accidents at work, occupational diseases, or are a common consequence of staff turnover. Through defining the hidden costs as such, the researchers seem to take on the view that these costs are the result of the so-called hidden productivity.

In the case of hospitals, the implementation of main statutory activities, *i.e.* the provision of medical services to patients, generates the highest cost in the cost structure of the medical entity. In the course of its implementation, however, various other costs arise, *e.g.* costs resulting from mismanagement, duplication of the employee's duties, or activities which terminate in medical errors. Thus, hidden costs emerge also from the necessity to provide medical services which are not listed as primary statutory tasks of the medical facility.

The identification and measurement of hidden costs may be facilitated due to the application of management support called the Socio Economic Approach to Management (SEAM). This approach originates in the theories of Taylor, Fayol and Weber, but is constantly being developed in practice (Zardet & Voyant, 2003). The method is successfully used in various companies and institutions around the world (including France, which gave birth to and is further developing this concept, the United States, Mexico, South American countries, Spain and many others). SEAM is targeted at improving organizational effectiveness whose provision is possible thanks to continuous economic analyses and evaluations. The approach requires the engagement of all employees in the changes carried out in companies and institutions. Accordingly, the involvement of employees in improving the company's efficiency leads to a visible reduction of hidden costs. It also helps to eliminate problems connected with a drop in labor productivity. The desired level of productivity is frequently achieved due to a detailed analysis of interpersonal behavior within the company, an analysis which examines such issues as *e.g.* communication problems. Therefore, SEAM helps not only to *identify*, but also to *reduce* hidden costs. Numerous examples of

the application of measurement, identification and analysis of these costs appear and are examined in such works as e.g. *Work and People: An Economic Evaluation of Job-Enrichment* (Savall, 2010)<sup>1</sup>.

The idea of efficiency improvement conceptualized in SEAM arouses great interest among practitioners and researchers. The exchange of views on the subject takes place during international scientific conferences held in Lyon, France.

## 2. Research methodology

The solving of the research problem has been accompanied by the analysis of literature sources, sources written mostly in English. An overview of the definitions of hidden costs has been performed, on this basis of which the author assumed that these costs are associated with insufficient quality of the realized processes. Furthermore, hidden costs have also emerged as a broader category than the costs of the lack of quality, including the provision of services with an intended level of quality. A specialized public hospital served as the subject of research. It turned out that in the case of the analyzed facility, poor quality often leads to medical errors (such as e.g. inadequately performed surgeries, improper procedures, or poor work organization). Consequently, the committed errors have been evaluated and defined in terms of costs. In the examined medical entity up-to-date entries in the account records are made on the basis of the documented evidence. The entries appear in book-entry form also in later periods, e.g. as a result of unforeseen events such as complications following a medical procedure or as a result of damages paid to patients and their families. Moreover, hidden costs also include costs which are unavoidable, being the result of non-standard services.

The analysis of the sources of hidden costs has been carried out with the use of qualitative research (Miles & Huberman, 1994). Purposive sampling has been adopted (Flick, 2002) and interviews in a specialist hospital with the hospital director and employees of each occupational group (three doctors, three nurses and three administration employees) have been conducted. The plan of the interview has been structured (Fontana & Frey 2000 Wengraf 2001). What is more, an analysis of hospital records has been performed, involving the study of accounting records and financial statements. The analysis and the further synthesis of the data obtained has been applied as the main research method. Empirical studies have been carried out in September 2013.

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<sup>1</sup> Original work published 1981

The survey was aimed at obtaining answers to the following questions:

- Are the members of each occupational group aware of the existence of hidden costs?
- From what do the hidden costs arise and what are their causes?
- What kinds of hidden costs occur in the hospital?
- What measures are taken to reduce sources of hidden costs or to eliminate them?
- Whether and how the information about hidden costs are used?

The search for answers to the above questions required not only conducting interviews, but also performing an analysis of relevant documentation.

### **3. Research results**

The results of the interviews and the performed observations together indicate that potential sources of undesirable cost are clearly associated with the inadequate use of physical and human resources within the hospital. It turned out that the surveyed occupational groups are aware of the presence of hidden costs. These costs are the consequence of improperly performed medical services, as well as of several faults occurring in the course of non-medical processes. The researched groups listed and specified human resources, property, information and processes among the sources of these costs.

The results point at irrationality in the use of physical resources (property) reflected in an incomplete use of the hospital's medical equipment. The operating time of medical equipment emerged as largely dependent on the time during which the doctors are on duty. Administrative employees admitted that this situation mirrors the lack of control concerning the utilization of staff's and equipment's working time. This, in turn, demonstrates the absence of a time management analysis. They also stated that the hospital lacked in analyses with regard to: the validity of purchases, the calculation of purchases and the prices for services, the needed premises, and epidemiological matters. However, the medical staff did not identify any of the above-mentioned irregularities. What is more, the results showed that the hospital frequently performed irrational changes in the management of infrastructure, like e.g. when old equipment has been replaced with new one right shortly before the ward's overhaul and renovation. Therefore, it can be said that the facility was missing a purchasing plan analysis. Respondents (administrative staff, doctors and nurses) also highlighted the absence of any supervision over the documentation concerning the repair work.

There was also no scheduling with regard to maintenance, major repairs, and the attribution of responsibility for repairs and the servicing performed. Corrective actions were implemented too late, which

resulted in increased repair costs (these irregularities have been pointed out by the director and administrative staff).

The described inefficient processes were also related to the transport between hospital wards. The operation time of the vehicles was connected with the working time of the employed drivers. Thus, improper time management once again emerged as a cause of additional costs, here with regard to the purchase of transport services from outside of the facility (these irregularities have been specified by the hospital director). Moreover, in the course of the interviews it became clear that uneven workload distribution among the hospital staff is also a significant source of excessive costs. The hospital lacked supervision and had insufficient verification of the validity of the performed duties, especially in connection with the work performed by administrative staff after hours. Additionally, an employment-needs analysis carried out by the respondents (administrative staff, doctors and nurses) showed that in some wards the ratio of employed medical staff in relation to patient number is inadequate and irrational. Another source of hidden cost was the lack of control over the working time of the employed doctors. Labour productivity of these workers was reduced due to the fact that they "were working" in different facilities at the same time.

The interview with the director revealed another source of superfluous costs, namely the lack of control over the disposal of medicines. Due to the doctors' negligence in writing orders for medications several medicines were inscribed as additional costs. The hospital did not have an updated formulary. The increase in the level of hidden costs was also caused by incorrect filling of admission and treatment documents; sometimes there was even no patient medical record. Accordingly, these actions led to the situation in which the National Health Fund did not pay for the performed services, leaving the hospital responsible for bearing the costs. In addition to all this, the director enumerated the exploitation of specialized medical equipment commissioned by private doctors' offices as another source of hidden costs. As a result of these practices, hospital amenities and assets had to be frequently repaired and replaced. He also highlighted that hidden costs resulted from the unfavorable terms of leasing the hospital equipment. During the interviews with the nurses it was revealed that unnecessary costs were incurred in connection with the preparation of patient's discharge from the hospital. Such costs concerned the activities related to assembling documentation and performing additional tests, as well as the cost of patient medicines. They also resulted from the compensation paid by the hospital for committed medical errors.

It turned out that hidden costs in relation to the provision of medical services also arise from the admission of patients who do not have a permanent residence and are thus kept there a while after treatment. The decisions concerning outsourcing lacked the exact calculation of costs, or some of the calculations were inaccurate (these sources of hidden cost were pointed out by the director, doctors and nurses). In cases where a patient was being detained for a period longer than the necessary time of hospital treatment, members of the

medical staff (nurses, doctors) and the director were often engaged in the search for a place where the patient could be relocated.

The search for potential savings in the case of the purchase of services requires the hospital to conduct comparative analyzes of service costs provided by different entities. Benchmarking is used only in regard to certain costs of processes. The rest of the costs (such as the costs of nutrition, laundry or cleaning) are compared with the costs of other processes.

Unfortunately, not all sources of hidden costs can be reduced. In the provision of a range of medical services certain costs are incurred continuously, even though they are unnecessary or unjustified.

#### **4. Management decisions regarding the reduction of hidden costs**

The results obtained during the interviews aroused the management's interest. The analysis of the sources of hidden costs contributed to the introduction of a number of changes concerning hospital management. The study facilitated the search for potential savings. Management decisions concerned various changes in the methods of managing: human resources, time, property, purchasing processes and controls. They also contributed to the implementation of changes in contracts with contractors. The payment given to medical services contractors was no longer dependent on the amount of services rendered, but the amount of the services contracted for. The new contract terms aim at protecting the hospital against situations in which the payer (the National Health Fund) does not cover the costs of the performed services.

Furthermore, another modification implemented within the hospital structure was the rationalization of tests performed on patient's admission to the hospital. A thorough analysis of the needs has been performed, since in the past there have been instances when the same expenses were simultaneously incurred by several wards of one single hospital. The detection of the sources of these unnecessary costs caused a change in the procedure for patients admission. Currently, a careful analysis of any commissioned medical examinations is being made. What is more, only experienced doctors who are cautious with regard to prescribing additional tests are employed to work in emergency departments.

The results of the conducted study provided evidence that through analyzing available cost evidence hospitals should become targeted at gaining total control over *all* processes which generate costs. Improving processes, increasing the efficiency of resource use, as well as the measurement of the effectiveness of undertaken actions are all done on the basis of analyzing data concerning the sources of hidden costs. Such improvement of processes is supported by the development and implementation of appropriate policies and procedures within the organizational structure of the facility. It also requires a new information system to be

developed, a system including cost figures. This system is designed to facilitate the control of the purchase of services, materials and the use of resources. It is also designed to ensure a smooth realization of error-free processes. On the basis of an improved cost analysis (particularly concerning the hidden costs arising from various sources) managers are able to determine the cause and effect relationship with regard to the reduction of these costs. Moreover, conducting interviews with the staff can certainly bring several additional benefits. Thus, cost management is helpful in understanding the structure of costs. Nevertheless, a hospital is a specific institution in which some of the costs incurred during the provision of medical services cannot be fully reduced or limited – such costs (e.g. the cost of saving lives) simply have to be incurred.

What is more, the research shows that all hospital employees should participate in the adopted program of cost management by endeavors to optimize costs. Identifying the sources and causes of hidden costs renders the optimization process faster; it makes the employees feel they have greater influence on the results achieved by the hospital. It also turned out that the facility needs to develop and apply a new classification of expenses regarding management decision-making. Various costs result from insufficient quality. There are also those that arise from the need to provide medical services which are not listed as part of the hospital's statutory activity. Therefore, it appears necessary to separate and analyze the costs of medical and non-medical activities, the justified and unjustified costs. A further subdivision of costs relating to the use of physical resources, human resources, as well as costs related to processes may also emerge as useful.

The new cost management entails decentralization in decision-making, a step which will facilitate the reduction of costs within a functioning information system. Decentralization integrates the personnel, triggering new ideas and initiatives. The basic elements of such management include: the analysis of cost sources, process analysis and control of cost processes. The latter category encompasses such issues as: reduction of costs while maintaining the value (revenue) provided by these activities at the same level, increase in the company's revenue while keeping its expenditure at the same level, limiting assets invested during the implementation of specific actions while maintaining revenue and costs at the same level (Shank, Govindarajan, 2008).

When the inefficient processes which are the source of unjustified costs were revealed, the hospital has limited and reduced its resources. The facility is also planning to reduce costs by no longer employing doctors specializing in specific areas but rather hiring experts from outside who will be available according to the facility's needs. Therefore, the hospital will resort to outsourcing not only of administrative services in support of the hospital, but also to outsourcing of *medical* services. As such, it seems that the implementation of an integrated management system which controls administrative but also medical processes constitutes an important factor in the general reduction of costs.



## Conclusions and prospects

The search for savings while having only limited resources at one's disposal is normal for any entity, including hospitals. It is influenced by the growing competition in the market of medical services, but also by insufficient funding. Positive financial results or even maintaining of the current financial levels require a careful analysis of human, material and financial resources, as well as a review of and further elimination of the ineffective processes. It turns out, however, that it is necessary to examine the *sources* of these processes. Drawing on the experience of the French, it is clear that the solutions advocated by ISEOR (Socio-Economic Institute of Firms and Organizations) researchers concerning the SEAM approach can be transferred to and applied in any institution in need of improving its managerial effectiveness. Moreover, interviews conducted with employees and top management point at abnormalities affecting performance degradation, flaws which should be eliminated as soon as possible. The reduction of labor costs can be achieved through the estimation and analysis of the causes of faults and errors.

As it was mentioned before, the search for new methods to improve the functioning of any organization appears inevitable. It turns out that the management of healthcare facilities cannot be solely based on analyzing archival data and references. Unfortunately, many of medical facilities frequently limit their activities to the preparation of analyzes evidenced in financial reports. However, under the conditions in which Polish hospitals operate (lacking in sufficient funds for basic operations, struggling with immense competition in the market of medical services) the information provided by financial accounting is insufficient; moreover, it is often delivered too late. As far as the Polish medical facilities are concerned, until recently extensive analyses of the hospitals' economic situation were neither useful nor necessary. There was no competition from the private sector, so the level of costs was insignificant. However, currently an increased interest in issues of cost management and cost analyses can be noted. Training initiated by the Ministry of Health concerning new cost accounting methods is being conducted. Furthermore, it is demanded *not only* of the employees of the financial and accounting sector to be aware of the size of the operating costs, but also of *doctors* – people most liable for costs in the wards. Therefore, the analyses of the economic situation in medical care facilities are becoming more and more multidimensional and comprehensive. They are based on an accurate estimation of all costs, both visible (historical/archived) *and* hidden. These analyzes originate in various theories of management, including the one that emerged in France in the 1970s.

The research conducted in the healthcare facility made it possible to identify areas where hidden costs appeared. The identification of several sources of such costs prompted radical changes in the management sector. It has been assumed that further improvement requires both: advances in personnel management and progress in property management. With regard to personnel management it is necessary to establish clear rules

concerning employment and pay awarding. The area of non-medical activity, on the other hand, needs to develop new procedures relating to duty and assignment of responsibility. It is necessary to reinforce supervision over the employees and material resources.

It is also essential to note that the majority of the respondents are aware of the need to reduce costs and of the importance of searching for various means of their reduction. The employees have come forward with ideas for the implementation of actions aimed at cost-cutting. Further surveying of the staff may contribute to a more accurate estimation of the cost levels of the researched areas and sources.

Examination of the sources of hidden costs and the hospital's further use of supporting management methods may, in the long run, account for:

- improving the efficiency of all organizational units,
- work organization improvement,
- an increase in the competitiveness of the provided services by improving their quality,
- improvement of the organizational structure,
- advancement in the system of incentives/motivation.

It appears crucial to emphasize that the measurement of hidden costs and the following analysis of their sources is a pivotal factor in improving the efficiency of any company. The information obtained from the research prompts the undertaking of various decisions, the realization of which confirms that the reduction of hidden costs appears synonymous to the increase of the added value.

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