

HOSPITAL MANAGEMENT SUPPORT THROUGH THE USE OF MANAGEMENT ACCOUNTING

Agnieszka Kister
Maria Curie Skłodowska University, Poland
akister@wp.pl

Abstract:

The aim of the study is to present the range of management accounting tools used by hospital authorities in the management decision-making process. Moreover, the study also focuses on determining the particular problems aided by the use of management accounting. The subject of this study encompasses three hospitals in Lublin Voivodeship, while the research body revolves around the use of management accounting tools. A questionnaire containing 15 complex research questions has been conducted, followed by an individual in-depth interview with the hospital administrators. An electronic database, local library files, reference list of the published articles and numerous books have been consulted during the preparation of the questionnaire. The author argues that the use of the management accounting tools helps assess the efficiency of fulfillment of the objectives and assessing the analysis of sources and processes of value creation. As a result of the conducted study it has been shown that the role of management accounting use in medical facilities is of great importance. Furthermore, the analysis results are employed in the organization's continual development, as it provides information for all organizational units. Accordingly, this information is used in estimating service costs, creating budgets and variance analysis. To a lesser extent, the analysis results lead to a comprehensive performance measurement and increasing employee motivation.

Keywords: costs in hospitals, management accounting, cost accounting, management decisions, activity based costing

1. INTRODUCTION

Management accounting has certain versatile qualities that are typical of companies and public hospitals. They express the following (Szczypta, 2012, p. 74): the information provided by this type of accounting is directed basically to the end-users of a given product, grouped by rules and regulations drawn up by the unit, it is essential and useful, it is *ex ante* and *ex post*, it relates to events expressed by value and by quality, the usefulness of the information should be higher than the costs of attaining thereof. The purpose of this paper is to present the range of management accounting tools used by hospital authorities in the management decision-making process. Moreover, the study also focuses on determining the particular problems aided by the use of management accounting. The author argues that the use of the management accounting tools helps assess the efficiency of fulfillment of the objectives and assessing the analysis of sources and processes of value creation.

For management purposes, as part of the decision-making processes, the managers expect different properties of information and a different scope and kind of information within various time horizons. This entails a different way of selecting the operational and strategic accounting tools. The application of the management accounting tools changes as a result of new expectations of medical institutions due to a change in the conditions in which the said entities operate. They are exposed to an intense competition, frequent changes in legislation, and control of results by the entities that supervise the said institutions. Therefore, the tools of this type of accounting need to be adapted to the tasks carried out by the entities. A lot of information is supplied as part of the management accounting as per the following three rules (Horngren et. al, 2006, pp. 11-13): taking account of the cost-profit analysis, behavioral and technical conditions, and an approach using different costs for different targets. All the three rules may be completed at the same time. Within the meaning of the first rule, decisions should be taken only when the stock used as a result of decisions bring profits that exceed the costs of attaining the stock. According to the second rule it is assumed that employees have, as part of management accounting, a behavioral and a technical mission to accomplish. The behavioral mission is connected with the analysis of employees' behaviour and the analysis of actions that generate the value performed by the employees. Management accounting is therefore required to generate information also expressed in measures other than financial. The accomplishment of the technical mission results in acquiring the appropriate information in the appropriate format and at the proper time. The third rule allows the use of different expenses for different purposes, so creating various classification sections of expenses is reflected in internal reports. The growing need for information by entities that keep management accounting resulted in its wide variety of tools. These include (Szycha 2007, p. 25): expense account systems, strategic planning, operational budgeting, classical result measurement systems, Balanced Scorecard, cash flow analysis, target costing and financial feasibility analysis. Ch.T. Horngren (Horngren, 1995, p. 281) stated that the concepts and methods of management accounting are neutral instruments themselves. They may be used correctly or incorrectly. The correct application of the said tools requires good knowledge of methods of their use by persons taking key decisions in a specified economic entity. If we follow the said statement, the study description was carried out based on interviews conducted with directors of public hospitals who were also provided with the survey.

The analysis of references provides us with evidence for visible changes that occur in the perception of the roles, scope and methods of management accounting serving the management needs, and in the use of the tools. Management accounting has become an integral part of the management process due to the participation of management accounting experts in taking managerial decisions, organizational changes, as well as information selection. This type of accounting is subject to changes as societies develop. The methods it uses are adapted to new information and economic needs of the societies. It is developed through the influence of the environment in which it applied and at the same time contributes to forming the environment. It also affects the creation of economic reality. The above statements confirm us in our conviction that management accounting is not considered only as a normative but also as a practical discipline. This is proved by the studies of changes in the management accounting in the context of the changing conditions. The said studies were carried out by Innes and Mitchell (1990), Kellet and Sweeting (1991), Cobb, Helliard & Innes (1995), Burns and Scapens (2000) and in Poland they were conducted by a number of experts including Szycha (2007) and Sobańska (2002 and 2003).

In the 1980s there appeared certain conclusions in the literature arising from the analyses of relations between theory of organization and management accounting calling for the application of qualitative

and explanatory studies as well as studies in the form of case studies (Ryan and others, 1992, p. 60). The concept of information economy was named costly truth approach by the above mentioned researchers. The literature included publications showing the applications of studies based on the theory of situation-based conditions in management accounting. The theory consisted in analyzing the dependency between environment variables and variables relating to an organization (technology, environment variety, organizational structure, management style) and management accounting systems and methods including the use by the managers of the information generated in the economic entity management accounting system. There have also been some publications that proved that there are many issues related to the identification and analysis of the applied measurement tools in companies (Anderson, 1995, Innes & Mitchell, 1990, Waley & Piper, 1990). There are, however, few references on the subject of the application of the said tools in medical care institutions. The enquiries about the efficiency of the measurement system, the extent of the information provided by the management accounting system, in the context of the system being useful in decision-making, are still valid. It turns out that management accounting is evolving together with the changes in the needs of the accounting system end-users. The only thing that does not change is the range of tasks of this type of accounting. One of such key tasks is to ensure the efficiency measurement system guarantees coherence between the objectives of organization, decisions and results. The above is because the measurement results contribute to implementing organizational changes that will, in turn, impose the improvement of the processes. Through the selection of the appropriate management accounting tools, the efficiency measurement system will become uniform and integrated with the visions of aims such as efficiency, and usefulness of the internal processes. Auzair and others (Auzair et al. 2005) claim that the designing of the management accounting system should take place taking account of crucial factors including organization mission and strategy and the type of the processes being carried out.

Management accounting applied in medical care institutions does not have a long history. The use of the tools offered by this type of accounting has increased as a result of a change in the situation in which the said entities are. The rise in debt necessitated the improvement of the unfavourable financial situation by using a bigger scope of the information supplied by management accounting. New information was expected the use of which would contribute, for the most part, to cost reduction. Due to a lack of resources necessary for the operation and on account of limited sources of income and an increase in the market competition, hospital also saw a growth in the demand for information from the market. The information proved to be useful for the said institutions achieving the required level of performance. It was also possible to compare the effects of the activity being carried on by a specific medical care entity with other entities. Following the changes in the operating conditions of hospitals it became natural to use the management accounting tools for the purposes of effective management and improvement of financial results.

2. METHODS

The study was focused on three hospitals in the Lubelskie province that are similar in size and with regard to the number of employees. There are hospitals, for which the establishing entity is the Voivodeship Local Government and the Marshal of the Voivodeship. The subject of the study conducted in 2014 was the use of the management accounting tools in specific entities. The research comprises cycles of gathering data through documentary reviews, analyzing data, undertaking actions and evaluating results. A survey questionnaire was applied consisting of 15 complex study questions which were then complemented by an in-depth interview. While preparing the survey questionnaire, an electronic database was used, files from local libraries were reviewed, including the reference list from the published articles and books. The inquiries were directed to the hospitals directors. They referred, among other things, to the perception of the idea of management accounting and the types of analytical tools applied in the medical care institutions being examined. The questions were also intended to explain what decision-making issues are used to support management accounting and what methods support the management process in an individual hospital. The respondents were also asked to assess the usefulness of individual tools in taking management decisions. The description of the results of the studies is presented on the basis of the analysis of case studies.

3. RESULTS

The respondents were asked to define the notion of management accounting. In two hospitals, A and B, it is recognized as a system that generates information used for continuous improvement of

organization. In the third hospital (hospital C), however, the way it is perceived is much wider. Namely, it results in providing information to all organizational bodies. It serves not only the continuous development of organization, but also performance measurement and employee motivation.

Management accounting is considered as a set of practical techniques and methods supporting the planning process, decision-making and control. The respondents were therefore asked to indicate the used methods. In hospital A, the management process is supported by information on the values of estimated costs of services, which comes from budgeting and displacement analysis. Hospitals B and C also use the said information to make management decisions but at the same time analyses are conducted which focus on return on investment. The analytical tools applied in management accounting that were indicated in hospitals A and B are: benchmarking, ratio analysis and risk assessment. In hospital C, however, statistics were also recognized as an analytical tool. The obligatory reports made for statistical purposes including reports on nature of expenses as well as for the needs of conducting internal analyses. They serve, on a regular basis, the optimization of the expenses of managing the medications and materials used in providing medical service.

The information generated by management accounting in hospital A is used for the purposes of formulating the entity strategy, taking operational decisions, inspecting the activity to ensure that resources are used efficiently, as well as for the purposes of implementing the procedures governing the entity management, risk management and internal control procedures. In hospital B, the information derived from management accounting assist the strategy formulation and is used to streamline the flow of information between different units of the hospital. It is also useful for inspecting the operation in the implementation of effective tasks and the use of available resources. It is used for the preparation and implementation of the procedures governing the entity management, risk management and internal control procedures. In hospital C, the respondent admitted that the information generated by the management accounting system is used for long-term and short-term planning of operation, designing the remuneration policy, taking operational decisions, particularly those related to cost reduction, as well as for the measurement and the financial and non-financial reporting of performance.

The main issues connected with decision-making that are supported by management accounting are maintaining the financial liquidity, workforce activity stimulation, and achieving an efficient planning and control system. The above issues were pointed out by all respondents and described them as key. In hospital A the following were recognized as minor: controlling the flow of current assets and fixed assets economics, cost management, calculations and price-related decisions. The issue of achieving a constant growth of efficiency and productivity was also regarded as insignificant. Aside from the difficulty with maintaining the financial liquidity, the following problems were observed in hospital B: issues related to stimulation of the workforce activity in terms of solving problems connected with decision-making achieving an efficient planning and process control system. The key issues related to decision-making indicated in hospital C (aside from the ones connected with maintaining financial liquidity) were: controlling the current assets flow, cost management, stimulation of the workforce activity and achieving the efficient planning and control system.

The respondents were asked about changes that take place in management accounting in the hospital covered by the survey. The respondents admitted that the extent of analyses applied as part of accounting was extended, year by year, an increasing number of actions are covered by reports. The traditional cost accounting operates along with the Activity-Based Costing. On the basis of the process costs data, they are analyzed in terms of value and decisions are taken with respect to reducing the expenses related to processes and resources. All the hospitals implement new accounting methods in order to obtain more accurate information about patients and costs relating to implementation of processes. The calculation of patient treatment costs is done using such cost drivers as one-day hospital stay and a patient with medications and medical procedures he/she was prescribed. In the basic activity cost centres the above are medical procedures, whereas in the auxiliary activity cost centres, they are services provided by the centres. What is also important is, apart from the calculation of costs related to medical processes, calculation of non-medical processes (auxiliary). The results of the analyses of costs related to the nutrition processes, laundry services, and cleaning services all caused that all the three hospitals used outsourcing of the said services. The traditional cost accounting provides information about nature of expenses. The information is not very useful for controlling the responsibility centres. Therefore, three hospitals are subject to a wider analysis of the development of level of costs divided into fixed and variable expenses. The assessment of the level of

fixed costs allowed actions aimed at reducing their extent to be taken. A reduction in the employment of administrative staff and disposal of redundant property were observed in all areas. A more accurate settlement of expenses is effected by activity-based costing. The implementation of the above in hospitals A, B and C was not easy due to a resistance from employees with respect to changes related to increased amount of labour.

Benchmarking, activity-based costing and variable costing are the methods supporting the management in all hospitals. In hospital A, apart from the above-mentioned, continuous improvement was pointed to.

The survey enquiry related to the factors which had an influence on obtaining a broader scope of information than the information derived from traditional cost accounting. The key factors for all entities under scrutiny were the increase in competitiveness on the medical services market and aiming at cost reduction and improvement of results. There were some barriers, however, which included resistance in relation to changes and large amount of labour. Only in one hospital, which was hospital C, there was a lack of proper IT resources so that the entire operation of the entity could be covered by activity-based costing.

The management accounting tool supporting the management is budgeting. Therefore, the subject of inquiries was the method applied when determining budget values and the time for which budgets are created. In all the hospitals, budgets are created for one year by means of incremental budgeting. This enables updating the long-term plans and controlling the changes in the hospitals budgets. The result of using the incremental budgeting is, first and foremost, the reduction of operational costs. The budgeting of responsibility centres encourages a more economical management of assets. The persons responsible for managing the resources use the data contained in budgets for the purposes of creating a coherent budget of the individual medical institution. Budgeting is connected with the motivation system because employees involved in creating budgets and rational disposal of resources. Hospitals A and C make use of the system of awarding bonuses for economical management of medical materials and medicines, as well as placing orders for materials that meet actual needs. The results of budgeting are used for control and evaluation of medical activity. The budgeting procedures enable the activities to be coordinated between responsibility centres. The consistent preparation thereof contributes to the rationalization of purchases, implementing medical procedures and other medical services.

Management is supported by selected organizational units. The respondents were asked to indicate the most important units. The answers were different in each of the hospitals. The economic analysis department, the budgeting department and the controlling department were indicated in hospital A. The economic analysis department was indicated as the most important in hospital B, whereas in hospital C it was the cost accounting department.

Each medical care institution is struggling with problems that require to be solved by the administration. Therefore, the respondents drew attention to three issues in respect of each hospital that require to be monitored. The primary issue observed in hospital A is the implementation of the set policy, activity budgeting, improvement of the quality of service provided to patients and the management of human resources. The issues regarded by the institution as insignificant included operation planning, managing the relations with suppliers and payers, developing new medical procedures, organizing medical activity, sale of medical procedures, information flow, IT implementation and restructuring. Hospital B has a problem with activity planning, budgeting, and improving the quality of patient service. The following issues were indicated in hospital C: activity planning, budgeting and restructuring. They are a result of the organization changes being introduced that involve the reduction of administrative staff, disposal of redundant assets and liquidation of non-profitable wards.

A very important tool applied in management accounting is cost accounting. The question addressed to the respondents regarded the determination of usefulness of information about expenses incurred in the decision-making process. In each of the hospitals, the vital information included costs of individual wards, nature of expenses, costs of expense centres other than wards and costs of unit benefits. In all of the surveyed hospitals, an important piece of information with respect to the evaluation of operation of hospital wards is the cost of one-day stay (the average cost of a patient's stay in a hospital ward). The management of a hospital involves the information about the costs of performing medical

procedures. Each procedure should be assigned quantitative lists of resources specifying the list of utilized materials and the direct working time of the personnel taking part in implementing the individual procedure. The cost settlement with respect to the centres that perform medical procedures is effected on the basis of equivalence number accounting. The manner in which the cost of patient treatment is determined was clearly stated in the Decree (Decree of the Minister of Health and Social Care, 1998). The said costs include costs of treatment in hospital wards, costs of medical procedures outside the ward and costs of medicines. Although the said Decree is no longer in force, the divisions of costs and the rules of their calculation specified therein are still used by the hospitals. In accordance with the draft act on amending the act on the publicly funded health care benefits of 15 July 2011, the act on amending the act on publicly funded health care benefits and some other acts, a new cost accounting was to be implemented in hospitals from January 2014. The said draft act included the rules for the application of activity-based costing, recording of costs, rules for linking the resources with the objects, cost evaluation of cost objects and the manner of determining the unutilized resources.

4. SUMMARY

Following the survey, it was found that the role of management accounting in medical care institutions is very important. The results of analyses carried out within the framework of the accounting are used for a variety of purposes including continuous development of the organization because it provides information to all organizational units. They are also used for estimating the costs of services, creating budgets, and displacement analysis. The analyses results lead, to a lesser extent, to a comprehensive measurement of hospital performance and motivation of the employees.

The use of the management accounting tools helps assess the efficiency of fulfillment of the objectives and assessing the analysis of sources and processes of value creation. The results of keeping accounts other than traditional include reduction of stock, improving the quality of processes and services. The information provided by management accounting supports the implementation of the strategy and taking tactical management decisions. The use of the tools depends on the objective in respect of which the information is created and used. The major objective indicated in all hospitals is to face the competition on the market of medical services and to aim at reducing the costs and improving the results.

What is particularly important in medical care institutions is the awareness of a variety of information needs on different management levels (Hofstede, 1981, pp. 193-211). Cost accounting is undoubtedly an efficient tool that generates information that is useful in management. As a result of the complexity of the processes, procedures and as a consequence of the need to rationalize the resources, the traditional cost accounting proved to be insufficient. The rise in the demand for a bigger scope of cost-related information was aroused by a need to calculate medical procedures, which meant the valuation of medical services. This requires participation in the cost calculation process not only from the financial and bookkeeping department, but also the medical staff. In the conditions of transformation which included medical care entities, questions on whether the accounting is perfect and fulfills its functions, whether generated cost-related information is useful for the still increasing group of users are still valid. The modification of the legal regulations applied in hospitals caused that the institutions are forced to value all services they provide. So, in order to provide services according to commercial rules draw up a list of payments for medical services. It is therefore useful to fairly calculate the costs using activity based costing.

The management accounting tools should make it possible to solve decision-making issues hospitals struggle with. A very important issue pointed out by all entities covered by the survey is maintaining financial liquidity. Stimulation of workforce activity in order to more rationally use the resources gives managers another cause for concern. It is therefore very important to link the motivation system with the results obtained by the individual hospital. The results are analyzed internally but benchmarking applied in all the hospitals enables obtaining a more accurate comparison between individual hospitals in a given region.

In the course of the interviews, it turned out that the issues related to the administration of medical care institutions did not result from limited resources designed for their operation. They are a result of the occurrence of the alleged dual subordination (clinical and administrative). For this reason there may be a problem related to a lack of or overlapping responsibilities in carrying out different

processes. Due to the above description, the complete use of the management accounting tools may be impeded.

Hospital management is based on various information, both financial and non-financial. It is supplied by the management accounting system. However, each entity of this type of accounting specifies its own tools the use of which will serve activity planning, taking operational decisions, performance measurement and reporting, and designing the policy of remuneration related to the results being obtained.

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