

MEASURING THE EFFICIENCY AND EFFECTIVENESS OF BUSINESS IN HEALTH ORGANISATIONS

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Summary:

For measuring efficiency and effectiveness of business in Health Organisation, apart from balance sheet, lately there has been a wide spread usage of performance measure of the individual processes as well as all the processes as a whole. This kind of approach enables more realistic overview and comparison of the capacity usage within a health organisation, from the aspect of pro-active implementation of corrective, preventive measures. The basic parameters that are used during the performance measurement within health organisations are embroidered in the continuous observation, measurements and improvement of all the individual activities within the process in order to increase the usage of their capacities in the most optimal way for a health organisation and smaller and wider social community.

Key word: Health organisation, efficiency, effectiveness, process, process performances, balance sheet, cash flow.

Introduction:

Managing people and an organisation as a whole, regardless of a type of the organisation and its nature, there is a constant request for making business decisions and it reflects through constant improving of the efficiency and effectiveness within the organisation.

What do actually the terms efficiency and effectiveness represent?

According to the definitions given in the international standard EN ISO 9000:2005. – Systems of quality managing – Basis and dictionary, efficiency stands for the relationship between the achieved results and the resources that have been used, and effectiveness is the level up to which the planned activities have been achieved. In a similar way, those two terms have been defined by the well known management guru Peter Drucker, who thinks that the effectiveness means “doing the right things” and the efficiency is “doing the right things in right ways”.

A good manager, according to Isaac Adigues, shall always tend to ensure both the long-term and the short-term efficiency, and the long-term and the short-term effectiveness of the business decisions. This means that the decisions are efficient and effective in a short-term is the decision maker gets focused on what to do now and how to do it now. When the decision makers want the long-term efficiency they need to focus on decision making that will thrill not only the present needs, but also the future needs of the customer.

Long-term efficiency requires the decisions to be focused on the integration, meaning the transformation of “mindset” of the organisation, or “its identity”, the present set of values, way of acting and the philosophy of the organisation in one “system” as a functional whole.

1. Methods for business efficiency and effectiveness measurement of a business organisation

A special problem for each manager is how to find the adequate way for continuous measurement of the effectiveness and efficiency within a business organisation. Methods that are being used in the process can vary, as well as the use of the very methods.

The oldest way of measuring the efficiency, as well as effectiveness up to a certain point, is based on the

accounting-record data, gotten from different kinds of financial reports, like balance sheets, cash flow, changes in the managing structure etc. Besides these methods, for measuring efficiency and effectiveness, there are methods like process performances of a certain type of organisation.

1.2 Analysis of balance sheets as the basis for measurement of efficiency and effectiveness of business within a health organisation

Analysis of the balance sheets gives the basic indicators on the relationship between the means and the sources of the means, about the structure of the means and the structure of the source of the means. The actual growth of the basic means happens based on the acquisition, building, reconstruction, modernisation or recovering the basic means that have been unusable.

According the aspect of the role of reproduction within the organisation, the basic means can be divided into two groups: ¹ the basic means for the preparation and the active basic means.

The basic means in preparation are in the phase of the technically-technological enabling in order to be included in the process of reproduction. In the beginning these means are money, but then, through the fore planned number of phases, they transform into the basic means in use.

The basic means can, in a certain situation, be placed out of function. Let's take for instance a medical instrument that cannot be repaired because of the lack of the spare parts, the lack of the trained mechanics and the lack of interest for this type of service. Namely, the percentage of the basic means in function and the basic means in preparation and out of order shows the level of usage of the existing capacities.

From the perspective from a health organisation, as well as some other organisation, this relation show whether there are any internal reservations for improving the efficiency of the organisation businesses, what is the level of the reservations and what should be done in order to improve the efficiency of business of the organisation?

The higher the level of usage of the basic means the bigger the possibility to use the capacities of a health organisation.

¹ P.Bogetić, Analiza Bilansa,, Podgorica“, Beograd, 2000., p 32.

This can directly affect the increase or decrease of the efficiency growth within the given organisation. Namely, the unused basic means, unused for any reason, understand the lower efficiency of human resource efficiency, meaning to decrease the possibility of satisfaction of the customer's needs, in this case – the patients.

The analysis of the working capital or the current possession as certain authors call it, presents also the basis for measurement of the efficiency of health, but also some other types of organisations.

The working capital mainly emerges in cash shaped or natural shaped manner. Generally speaking, the basic goal of managing the working capital is pointed towards the faster turn of the "initial" cash means, through purchase of the materials, making semi-manufactured goods and finished goods, as well as the delivery and charge of the goods, into the new and constantly bigger amount of the cash resources.

The analysis of the working capital can show the decrease or increase of the means as a whole, regarding the past period, or a change of the very structure of the working capital.

The reasons for working capital decrease can be different, for instance the irrational usage of the means or service, procurement conditions, unrealistically high level of flow etc. The key task of the management in these situations is to define the reasons for the decrease of lack of the working capital and to implement the corrective activities. The lack of the working funds directly affects the quality and efficiency of business within an organisation. For example the health organisation that lack money for purchase of the necessary resources, including the payment rates for it staff, directly decreases the level of its capacity usage and in the same manner it decreases the efficiency of its business.

During the analysis of the working capital it is useful to compare the amount and the structure of the means in the past period of, for instance, 3-5 years, with the present affairs, as well as with the width of the business being performed at the period in comparison to the present period. Every organisation needs the analysis of the level of usage of the working capital. The "coefficient of flow" shows how many times have the working means "transformed" in one year. The management of each organisation tends to increase its coefficient of flow. The bigger the number the bigger the overall income or the profit of the organisation, under a condition not to create any loss over the services and the products.²

The analysis of the source of the means shows the ownership structure of the means. Taken this aspect, it is necessary to perform the analysis of the ownership structure of the means. Capital, meaning, our own means, equals the working means of an organisation/basic and the flow means together/ minus the value of the commitment of an organisation. The bigger the own means of the organisation, the less "vulnerable" the organisation is to the

market changes and vice-versa; the bigger the amount of commitments the more the organisation is "vulnerable" to the market influence.

The relationship between the flow and the obligations shows the ability of the organisation to its short-term debts. For instance, if the difference is bigger than one, it means that the organisation can fulfil its obligations without taking another loan. This means that the organisation is efficient. If this coefficient is less than one then the organisation cannot fulfil the obligations it has without taking a new loan.

Through the analysis of the balance sheets for many years in the past can make an overview whether the value of the organisation is decreasing or increasing. In every case, when we take the value of the organisation and decrease it means that the means we have are not used properly and efficiently. If the analysis of the balance sheets shows the tendency to increase the value, the organisation is said to have used its means efficiently and properly.

1.2 Analysis of success balance as the basis for measurement of efficiency and effectiveness of business within a health organisation

Unlike the balance sheets that show the property and commitments in a certain period, the success balance shows the income and expenditure of the organisation for certain amount of time.

As the success balance always has the numbers for two audit periods it allows us to track the tendencies in the overall income and the overall expenditure, as well as the increase or decrease of the profit with an organisation. Following the tendencies of certain points with the success balance shows the need for the analysis of a sample and implementation of the corrective measurements. Even though the shown income "indicates" that the rational and efficient business of the organisation, they are not the warranty for the good organisational management. It is only then when we define whether the percentage of the income is satisfactory or bigger than the expected, that we can consider an organisation to have rationally used the engaged means.

Based on the data from the balance sheets and the success balance it is possible to calculate the coefficient of efficiency that, actually, shows the ability of turning the property into money, without significant price lowering, meaning an ability of the "property" of an organisation to circulate in the reproduction cycle without pauses, as much as it has planned and according to the planned dynamics.

The coefficient of the current efficiency can be calculated when we take the total working means and divide them with the short-term obligations, and the coefficient of the flow can be calculated if we take the overall income and divide the with the average needs.

In a similar manner, we can calculate the coefficient of flow and the obligations, the coefficient of the storage, etc.

1.3 The cash flow as an element for measuring the efficiency of business within a health organisation

As the third important element that is needed for tracking the efficiency of business within an organisation is the cash flow of the currency means. The cash flow basically

² Stepen iskorištenosti obrtnih sredstva može se izračunati pomoću slijedeće formule:
 $S_i = \frac{\text{Iskorištena sredstva}}{\text{Ukupno angažovana sredstva}}$
gdje S_i predstavlja stepen iskorištenosti sredstava.

represents the entrance of the money into the "business" of the health organisation and the exit of the money from the "business" of the health organisation. It is created on a monthly basis, through paying debts and interest rates, etc...

An organisation has a positive cash flow in all the cases possible if the entrance into the "business" is bigger than the exit, and vice-versa. The organisation has a negative cash flow if the entrance is lower than the exit.

2. Measuring the processes performance as an element for measuring the efficiency and effectiveness of a health organisation

Even though the balance sheet and the success balance give the important data for measuring the efficiency and effectiveness of a business organisation, it is necessary to conduct measurements of the performances of processes of the products and services that a health organisation provides and makes.

Generally, during the measurement of the performance of the processes of a health organisation it is necessary to take in the consideration all the processes that are going on in the health organisation, like for instance: the needs of the patients and other interested parties, ensuring resources, offering health services, using capacities, managing the databases, calculating the level of satisfaction for the given services. In order to perform these operations it is necessary to analyse in detail all the processes and determine what is important for each of the processes individually and how can we improve in the best manner possible. Also, it is necessary to ensure the "control spots" and "control limits", define the measurement criteria, ways of implementation, responsibility for the measurement and monitoring, creating the documents, analysis of the results and the ways of suggesting the corrective measurements.

One of the most important criteria for measurement of the effectiveness, and in an indirect way efficiency of the business of health organisation is definitely measuring and monitoring the results of analysis of satisfaction of the patients/services users.

Another important criterion is the level of existing capacity usage. The third is no less important and it deals with the employees within the organisation and the level of their satisfaction. The fourth can relate to the suppliers and the social community as a whole, etc.

During the analysis of the efficiency of the processes within the health organisation, it is necessary to answer the four following questions:³

- Is the process identified and defined in a proper manner?
- Have the responsibilities been given?
- Do we apply the right procedures?
- Is the process giving the estimated outcomes?

If the answers to these questions are YES! then the actual process can be considered efficient and effective at the same time. However, if the answer to any of the questions is NO! then it is necessary to take the corrective measures

that will contribute to overcoming the reasons for failure in the process.

In order to keep under control the entire system and the processes, it is necessary to document all of them up to a level that satisfies the needs of an organisation. During this process it is necessary to take care about the possible consequences of the risk, that if a certain process does not act under the controlled circumstances, we shall take in the consideration the following elements:

- Analysis of the possible mistakes and their effects,
- Analysis of the structure of a flaw
- Mutual influence of certain activities and
- The ability of a process to ensure the expected results.

Measuring the performances of the products and process directly contributes to improving the efficiency of work of a certain organisation in many ways. Take, for example, a case of effectiveness of work of an x-ray instrument or a CT scan. If we see that we have too many people waiting in order to use this service it is necessary to make the following analysis for the period:

- Number of the patients for the period
- Number of the patients that have had the x-ray or a CT scan examination
- Number of the repeated terms for patients due to the insufficient capacities of instruments
- The necessary theoretical time of the scan
- The realised average time of the scan
- The positive and the negative difference
- Determine the level of usage/non-usage of the capacities
- Determine the causes and implement the corrective measurements.

The difference between the planned and the actual scans in a certain time span can also present the basic usage of the process and at the same time the basis of measuring the efficiency of the business of a health organisation.

In a similar manner it is necessary to analyse the other processes and a system as a whole, in order to determine how much it is possible to improve the efficiency and the effectiveness of the business of the health organisation.

3. Advantages and disadvantages of using the balance sheet and success balance for measuring the efficiency and effectiveness by comparison with the process performances in health organisations

The basic advantages of using the balance sheet and the success balance for measuring the efficiency and effectiveness is the following:

- Through precise and easy accessible financial data that are necessary for the effectiveness analysis
- Simple usage of the data
- The indication of the "trends" of moving for certain indicators, in the future.

The main disadvantages of using the balance sheet and the success balance are:

- Relatively "old" data that does not allow implementation of pro-active activities, but only defining the facts

³ EN ISO 9000:2005., p 9.

- The summed data for the organisation as a whole
 - Impossibility to assess the process to be improved.
- The advantage of the process and product performances for improving effectiveness and efficiency in the health organisations is:

- Possibility of concrete and proactive determining of the potential reasons that lead or can contribute to decreasing efficiency and effectiveness within an organisation
- Possibilities of timely implementation of corrective measures
- Possibilities of increasing the usage of the existing human resources and materials and
- The possibility to increase the satisfaction level of the service users.

The disadvantages of the process and product performances for improving effectiveness and efficiency in the health organisations are:

- Possible insufficient knowledge about the process by the person that deals with it
- Inopportune or only temporary analysis of the process performances
- Lack of the needed documents
- Too large database documentation and so on.

At the end it is important to highlight that during the measurement of the capacity usage, meaning during calculating the efficiency and effectiveness of the health organisation, we shall always take into consideration the time dimension of the process. For instance, the number of

hospital beds is never equal to the number of the cured patients, and the overall efficiency of the health organisation depends on functioning of the each individual process and all the processes as the whole.

Conclusion

Measuring the efficiency and effectiveness of business in health organisations represents a very important managerial task. It can be performed based on different method and different methods. Furthermore, besides the balance sheets and success balance, we use more and more the performance of process, for determining business and success within health organisations. This kind of approach enables us more realistic overview and comparison of the capacity usage from the aspect of proactive implementation of the corrective/preventive measures. In this way, we decline the biggest disadvantage of usage data from the balance sheet and success balance in order to measure efficiency in health organisation, from the aspect of impossibility to take the necessary, proactive and timely measures for declining the potential uncoordinated actions. The basic parameters that are used while measuring the process performances of health organisations are held in the continuous monitoring, measuring and improvement of all the individual activities in the frame of the processes, in order to increase the usage of their capacities in the most optimal manner for the health organisation and wider social community.

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