ANALYSIS OF ECONOMIC INDICATORS FOR ACTIVITY OF THE HOSPITALS IN SOFIA REGION

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Abstract

In the article are presented and analyzed the main economic indicators of hospitals' activity in Sofia region for the period 2010 – 2012. The author formulates recommendations on optimizing the organization and management of activities and the financial resources of the reviewed hospitals. An important feature of effective hospital management is the style and resource thinking of the health manager. Achieving efficiency in the operation of the hospital requires an adequate approach by the hospital manager to analysis and evaluation of resources.

Key words: *economic indicators, hospitals, financial resources, effectiveness*

Health is human's need of paramount importance, but in modern world this need is transformed into sharply increasing value from medical point of view, as well as from social, economic, ethical, legal, political and international point of view.

Healthcare is among the most important, sensitive and undergoing continuous transformation areas of public life. Its sustainability is very important indicator meaning adequate development compared to people's needs with socially acceptable disbursement of public resources.

Our main objective is to introduce policy of cost minimization and effective resource disbursement and achievement of maximum quality of healthcare services on the other hand.

The healthcare system is dynamic and complicated system characterized by numerous elements and vastly branched structure. The hospital medical cares are part of this open system.

Irrespective of the highlight on primary healthcare because of the fact that the first contact with patients takes place there, hospitals remain the most important element when it comes to providing health cares and they disburse the highest share of the healthcare costs. The public perceives hospitals as fundamental element of the healthcare system. Their significance is due to the fact that healthcare institutions for hospital cares impact numerous and versatile processes. The particular resolutions about developing the governance policy in the hospital area are based on scientifically proven data, facts and evidence.

Hospital cares are provided by healthcare institutions that are mainly commercial entities, owned by the state, by the municipalities and/or by private persons.

The municipal (local hospitals) are sole proprietorship commercial entities that resulted from the public hospital healthcare institutions which existed until 2000 and underwent transformation, and the ownership of their capital was acquired by the municipality where the commercial entity is located and operates.

The operations of the municipal hospitals are about mainly serving the population in the populated area – municipality centre and the belonging smaller populated areas. Significant patient flow heads to the district hospitals since the municipal ones do not perform medical activities in all specialties.

The district (regional) hospitals are healthcare institutions – commercial entities that resulted from the public hospital healthcare institutions which existed until 2000 and underwent transformation. The ownership of their capital was acquired by the state and only part (up to 49%) – by the municipalities at the territory of the area whose population is being served by the healthcare institution. This way all municipalities of the area are shareholders depending on the number of municipality's population. This allocation is an expression of the prevailing state participation and the lower participation of each

municipality when it comes to funding and organizing the hospital medical cares at the district territory.

The district hospitals serve the population of the administrative centre of the district, as well as the population of the municipalities included in the particular district and some of them serve population from other areas.

Private hospitals are healthcare institutions for hospital cares that were registered as commercial entities owned by private persons.

The current health-demographic status of the population results from the continuous effect of numerous factors and influences. Some of them are bound with the general trends in the demographic development and others – with the specific characteristics of the historical, economic and cultural development of our country.

The demographic processes in Bulgaria are characterized by continuous trend of population decrease and population aging. The main reasons behind this are the low birth rate, the increase of death rate and emigration of many young people.

The problem about population aging and the deformed age structure is of paramount significance. The increasing number and share of elderly people (aged above 65) results in significant challenges that the social-insurance system, the social assistance system and the healthcare system face. This brings about the need of developing and effectively operating an adequate network of specialized institutions, as well as the need of providing adequate outpatient and hospital medical cares.

Population and healthcare professionals' satisfaction with the processes of changing healthcare should be among the decisive criteria when it comes to assessing the health reform progression, hence the reasoning of the necessary new changes in the healthcare system.

The objective of this article is to present and analyze the main economic indicators concerning the operations of the hospital healthcare institutions in Sofia district for the period of 2010 – 2012, namely the average cost per one received patient; average cost per one hospital bed; average cost per one used bed-day; average cost for medications on a single bed-day and average cost for food on a single bed-day. These indicators reflect the ratio of the costs incurred by the healthcare institutions to the achieved operational results (received patients, used bed-days etc.), and they are used for assessing the economic effectiveness of the healthcare institutions' operations and are calculated for each individual ward in the healthcare institution, as well as on the average for the healthcare institution.

Results and discussion

The following institutions operated at the territory of Sofia district in 2013 1 University multi-profile hospital for active treatment; 7 Multi-profile hospitals for active treatment; 1 Specialized hospital for additional treatment, continuous treatment and rehabilitation; 2 Specialized hospitals for active treatment, 1 Specialized hospital for active treatment of oncological diseases, 1 Specialized hospital for active treatment of pneumo-phtysiatric diseases and 1 Psychic health centre in their capacity of public healthcare institutions and 2 private healthcare institutions for hospital cares.

INDICATORS	**Regional healthcare institutions**	**Municipal healthcare institutions**	**For the whole region**
Value per 1 received patient /BGN/	1222,17	531,87	874
Value per 1 bed-day /BGN/	214,08	99,63	158
Value per 1 hospital bed /BGN/	63 345	20 245	38 290
Value per 1 food-day /BGN/	3,27	1,48	2,39
Value per 1 drug-day /BGN/	83,94	14,41	50,00

Table 1. Economic indicators for activity of the hospitals in Sofia region in 2010

INDICATORS	**Regional hospitals**	**Municipal hospitals**	**Private hospitals**	**For the whole region**
Value per 1 received patient /BGN/	1208,25	529,54	624,57	872
Value per 1 bed-day /BGN/	234,20	100,29	263,11	169
Value per 1 hospital bed /BGN/	68 027	21 412	21 499	40 877
Value per 1 food-day /BGN/	2,90	1,47	1,94	2,19
Value per 1 drug-day /BGN/	95,08	13,98	41,02	54,98

Table 2. Economic indicators for activity of the hospitals in Sofia region in 2011

INDICATORS	**Regional hospitals**	**Municipal hospitals**	**Private hospitals**	**For the whole region**
Value per 1 received patient /BGN/	1245,61	553,46	670,77	897
Value per 1 bed-day /BGN/	241,94	104,23	366,51	175
Value per 1 hospital bed /BGN/	71 515	24 519	31 332	44 871
Value per 1 food-day /BGN/	2,25	1,46	6,15	1,90
Value per 1 drug-day /BGN/	96,39	15,64	50,12	55,92

Table 3. Economic indicators for activity of the hospitals in Sofia region in 2012

As a result of the increased operational costs of all hospitals in the region the prime cost per one received patient also increased. According to the table above the indicator “Value per 1 received patient” for 2012 increased with 23,44 BGN compared to 2010 for the regional healthcare institutions. In the case of municipal healthcare institutions the increase is with 21,59 BGN and in the case of the private ones higher increase was registered compared to the previous year – with 46,2 BGN or 7,4%.

During the researched period the indicator “Value per 1 bed-day” also increased with 27,86 BGN in the case of the regional healthcare institutions. Nevertheless, in the case of the private healthcare institutions this indicator significantly increased in 2012 compared to 2011 – with 103,4 BGN or

39,3%, and most probably this results from the cost increase. In the case of municipal healthcare institutions the increase was insignificant from 99,63 in 2010 to 104,23 BGN in 2013.

The indicator "Value per 1 hospital bed" in the case of all hospitals in the region also increased in 2012 compared to 2010 with 17,2%.

In 2102 the indicator "Value per 1 food-day" significantly decreased (2,25 BGN) compared to 2010 (3,27 BGN) in the case of the regional healthcare institutions while in the case of the municipal ones – it was maintained with one and the same values. Its increase is drastic in the case of the private healthcare institutions - from 1,94 BGN in 2011 to 6,15 BGN in 2012. One of the possible reasons behind the significant increase of the average cost per one food-day is the change considering the clinical pathways with which the patients were referred, correspondingly the various prescribed diets.

During the analyzed period we also registered increased direct costs for medications and consumables and in 2012 compared to 2010 this resulted in the increase of the indicator "Value per 1 drug-day" in the regional healthcare institutions with 14,8%. In the case of the municipal healthcare institutions we noted that the value of this indicator went down in 2011 compared to 2010 and increased in 2012. The increase was also typical for this indicator in the case of the private healthcare institutions - with 9,1 BGN in 2012 compared to the previous year.

We should bear in mind that the values of the economic indicators are influenced by the number of patients received in the healthcare institution, as well as by the disease type and severity.

Conclusion

Because of the fact that healthcare institutions for hospital cares operate with insufficient financial resources and the medical activities lack funding on behalf of the National Health Insurance Fund and the Ministry of health, we should optimize the financial results at the healthcare institution level. We should shift our focus from the financial resources' shortage to the effective use of the available resources. This analysis could aid in making managerial decisions when it comes to identifying the most resource intensive hospital divisions and the arrangement of the relative shares of cost types considering their significance in treating the patients. In order to achieve better financial results we should operate simultaneously in two directions – generating more revenues and minimizing the costs of the healthcare institutions. We should clearly and accurately define the ways for cost cutting until achieving reasonable medical low levels without jeopardizing or worsening the quality of the service on offer. Cost cutting should be performed in view of: 1 received patient, 1 hospital bed, 1 drug-day and 1 food-day. Meanwhile, we should find the mechanisms for increasing the following indicators: number of received patients, number of used bed-days, beds' usability and turnover.

Personnel qualification is among the most valuable resources of the healthcare institutions, it is the basis of the medical service quality. In this light investing in the recruitment and retention of highly qualified personnel and in the continuous improvement of its qualification would have very favourable impact on the image of the healthcare institutions and would increase their revenues.

Each healthcare institution strives at generating positive financial result and should behave in conformity with the market environment. Making profit when providing hospital medical cares is in conflict with the social significance of this activity. The system success is measured with the effectiveness and efficiency with which it copes with the needs of the consumers using the services rendered with the hospital cares. That is why managing the financial resources in the healthcare institutions should ensure the achievement of high healthcare results.

When it comes to optimizing the organization and management of the operations and financial resources of the healthcare institutions in question what counts is the effective hospital management, as well as the style and resource thinking of the healthcare administrator. In order to achieve high effectiveness in the hospital operations the hospital manager should employ adequate approach towards the resource analysis and assessment.

REFERENCES

Grozdanova R., Management of financial and material resources in the hospitals in terms of restructuring, dissertation, 2012

Regional health inspection, statistics data of hospitals on the territory in Sofia region

Tsvetkova K., Analysis of the medical-treatment facilities' activity in Sofia region, Thesis, 2014