PUBLIC LOGISTICS IN MANAGEMENT OF MEDICAL ENTITIES (HOSPITALS)

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Abstract

The problem of public/social logistics application opportunities has been discussed in this paper. The public/social logistics is understood as the application of public objectives by the external entities within medical entities. There has been undertaken an attempt of showing that the greatest potential of costs reduction and processes diminishing in a hospital occurs in the logistics sphere. It has been indicated that the development of public logistics resulting, first of all, from the budget constraints is a kind of a panacea for the processes diminishing and the medical services effectiveness increase.

Key words: logistics, public logistics, public objectives, outsourcing of hospitals' logistic objectives**.**

Introduction

The public sector permanent withdrawal from the public objectives implementation as well as the increased interest in these objectives realization by private entities have caused that the new research area defined as the public logistics has been emerged (Kauf, 2014). This term consists of two elements: "logistics" and "public". Without taking into consideration the semantic context of these two elements, it can be stated that the public logistics, in narrow terms, means the time and space transformation connected with the public objectives implementation[7] (Eßig, 2005: 93) and the coordination of links among the involved institutions (public and private). The multiplicity of participating entities creates the necessity of considering the public logistics in the context of the supply chain. Then, the public logistics

[7] The concept of public objectives is understood as providing or ensuring the provision of services for citizens or other entities.

stands for the flow oriented management of the value creation public chains/networks[8].The public logistics, in broader terms, can be defined as all activities connected with the time and space goods transformation, independently of the goods ownership titles as well as the nature of an organization implementing those actions (Eßig et al. 2009: 8).

The emergence of the public logistics is consistent with the trend of The New Public Management, whose the main objective is the more effective and efficient management of the public units (Szołtysek, Twaróg, 2013: 27)[9]. One of the areas where the public logistics has been implemented is the area of medical entities, especially hospitals. However, in this case we deal with the public objectives, the implementation of which is connected with meeting the crucial social needs in the more effective method rather than the economic one. This fact authorizes us to use the notion of "the social logistics", which is defined as "shaping the socially crucial material and information flows, in order to obtain the defined time and space values (and supplementary attributes) resulting from the social needs and ensuring the society's appropriate functioning" (Kołodziejczyk, Szołtysek, 2009: 23).

The aim of this paper is presenting the public/social logistics optimization possibilities in hospitals.

1. Logistics in the health service objectives implementation

Economic, social and political tendencies cause that the public units are often forced to change their past methods of functioning: costs reduction, generating revenues, increase of effectiveness and coping with the increasing competition. The financial problems that the health care institutions grapple with are also added to this problem. Hospitals do not manage their financial resources dedicated to the renewal and modernization of physical resources that are necessary to implement the supportive objectives. The National Health Fund constantly decreases the expenses for the health care. Although, the amount of nominal expenditures in a current year is maintained at the unchanged level of 63,3 billion zł., which is about 6,7% of the Gross Domestic Product value (www.nfz.gov.pl), this amount has to be intended for the bigger number of patients. In consequence, the hospitals and health centers revenues will decrease. In Poland the health care

[8] Public chain of supply constitutes the network of organizations, government and local government agencies, institutions, private companies whose objective is the provision of the added value for the public sector and beneficiaries.

[9] The public logistics is recognized similarly by T. Tanimoto, who observes the effectiveness increase opportunities in the implementation of public objectives in the framework of the public logistics.

expenditures are at the lowest level in Europe and the Polish society is becoming older so the health care costs increase. All of these exert pressure on medical entities, which have to cope with the increasing number of patients and, first of all, with the decreasing budget.

Therefore, the following statement is not a incorrect: the financial problems are the main cause of implementing the restructuring actions. The planned financing according to the number of contracted medical services causes that the hospital managers concentrate on the component costs of procedures connected with the medical services implementation (Szołtysek, Twaróg, 2011: 315). Managers search for an answer: Where can costs be reduced? Costs for patients – no, but how about the structures or modified processes – yes. The greatest potential of the rationalization is cumulated in the material flows and in hospitals' human resources. It results from the fact that ensuring the undisturbed implementation of the key objectives connected with the health care services, requires the support of some auxiliary processes such as: logistic services – material management, transport of patients, management of medical waste and medicaments. Although, the aim of these objectives is ensuring the constant availability of resources (staff, hospital beds, drugs) necessary to conduct medical services, they do not have to be realized by the hospital staff but they are commissioned (in the framework of the outsourcing) to the specialized external entities (logistics operators). Such a solution suggests the medical institutions managers' new opportunities. In the hospital management practice, the outsourcing, in the scope of such functions as: catering, transport, surveillance of property, laundry, technical and IT support, cleaning, is often adapted. As it results from the conducted research by Marcinkowska (2012), hospitals do not delegate the following functions as: staff management, finance, marketing or accounting, to the external entities.

Outsourcing or public sector services privatization, including the hospitals' logistic objectives, are run on the basis of different principles, in comparison to the companies' practice. Public medical entities can obtain the logistics operators to implement objectives on the basis of competition regulated in accordance with the public procurement law. In this context, a hospital is obliged to publish the tender notices. They should specify the objective in details, precisely and clearly, in order to make the tender notices be standardized and comparable (Boesen, 2008: 315). The location and the method of the tender notices publication depend on the public objective value. Tenders notices can be published:

- on the bulletin board in an applying institution headquarters,
- on the webpage of the announcing a tender institution,
- on the webpage of the Public Procurement Bulletin,

– in the Official Journal of the European Union (in the case when the value of the public procurement exceeds "the European Union tax thresholds").

The appropriate procedure of selecting an ordering party consists of two steps. Admission to the second stage requires from the potential contractors (logistics operators) the fulfillment of the formal requirements and possessing the defined features that let them fulfill the objectives: among others, the features[10] are as follows: knowledge, experience, technical and human potential as well as the appropriate financial terms. In the second stage, the selection of the most favorable tender, i.e. the cheapest or the shortest one, is made. These criteria should not be the only criteria because they can lead to the short-term benefits (Kauf, 2008: 265). In the case of selecting a contractor who delivers complex services, as it happens with the contract logistics, the multi-criteria[11] evaluation that allows assessing the real project value is reasonable. Then every criterion should be assigned the appropriate importance i.e. a price constitutes 25% of all items, an objective performance quality and functionality – 50% and the rest criteria correspondingly less.

One of the limitations of the external operators' selection is the negotiation modes concern. The percentage of proceedings is the evidence: 1,09% – in the case of procurements representing the lower than the European Union tax thresholds value and 2,09% – in the case of procurements representing the higher than the European Union tax thresholds value. (Report 2010: 24). The fact that negotiations are not run is the obvious disadvantage of the logistics operator selection procedures. Therefore, new procedures eliminating the current concerns and allowing conducting a constructive dialogue should be created. Such a postulate seems to be crucial, because even the companies, which are currently cooperating with suppliers and which are not limited by legal acts or regulations in the framework of the contract logistics, grapple with the problem of an accurate specification and a description of services that would correspond to the requirements of the public procurement (Amirkhanyan et al. 2007: 714). It results from the fact that the public logistics is a new form of the public objectives implementation and the logistics operators have not been providing the complex services so far for the public sector. They have not been acquainted with the appropriate knowledge which lets really assess the needs and prepare the optimal solutions.

[10] Conditions that the employer should fulfill are defined in the art.22 of the law on the public procurement.

[11] It is necessary to define clearly the criteria in the announcement on the public procurement.

Because of those and also other problems, the ideal model of delegating the logistic objectives to specialized logistics operators by hospitals has not been elaborated. Preparing the universal procedures is impeded by the big variety of hospitals and these hospitals' medical services complexity. Although, it is true that the following rule exists: the bigger the medical entity is, the better economic results it can obtain. However, the hospital management still lacks the sufficient strategic oriented option and the readiness to make difficult and nonconventional decisions. These factors determine the processes and structures. However, it can be assumed that the majority of processes implemented in hospitals, especially processes connected with the supply, can be standardized. It also can be stated that processes in hospitals are conducted on the similar basis as it is run in the car industry. This provides i.e. the introduction of the *just in time* type deliveries, even within the operating suite or the appropriate hospital wards.

The pressures exerted on the medical entities (hospitals) in order to make the procedures shorter, is getting stronger. Those entities, which will not share the experiences of the business practice and will not implement the principles of the public logistics, will not be able to exist on the market. Markets systems fluctuate, new logistics operators, who are specialists in the medical entities services, emerge. Their offer should be taken advantage of and the processes or the hospital supply chain management should be improved.

2. Possibilities in implementing the public/social logistics in the sphere of hospitals supply

The crucial area of the public logistics is the sphere of the hospitals supply. Both, the distribution understood as the external logistics objectives and all areas of the internal material logistics (i.e. transport logistics, storing, material supply and waste management) belong to the group of this sphere basic elements (Pieper, et al. 2002: 267; Drees, 2003: 20). In this sense, the public logistics includes the whole hospital supply chain (medical chain) defined as the entire materials and services flows that are targeted at meeting the needs of a hospital as well as all other organizations providing services to patients (Schneller, Smelter, 2006: 5). The huge potential of the hospitals' reorganization works as well as the actions optimization in the framework of the supply chain are observed in the moment of the superficial analysis of employment, which is necessary to implement all logistic actions connected with, among others, patients' transport to hospitals, catering, supply of materials used in the hospital treatment processes or hazardous waste management.

In production companies the potential of costs reduction in the sphere of the supply has been appreciated for a long time. Similar advantages can be obtained in the hospitals supply sphere. It results from the great standardization of both supply processes and medical products. It results from the research conducted by the A.T. Kearney Institute and the German Institute of Therapeutics (DKI), that in hospitals the material costs reduction potential is shaped at the level of 20-25%, what constitutes the value of 3,6 to 4,5 billion Euros (DKI, 2010: 3). Moreover, thanks to the supplying processes optimization, it is possible to obtain the additional savings at the level of 20% of the processes general costs (DKI 2010). If these costs refer to the general costs of a hospital maintenance, the value of savings will be shaped at the level of 6,6 to 8,3% (DKI 2010). The medical materials (46%) determine the greatest element of the material costs.

The suppliers' structures of medical materials delivery are not monopolized but they cause that hospitals make selections among these suppliers on the basis of the market conditions (usually choosing the cheapest bidder). Hence, due to a big number of bidders, the hospital supplying processes are relatively complicated.

One of the opportunities of supplying logistics optimization is establishing the cooperation that let consolidate purchases. On the advanced medical markets (Western Europe, USA) this process is initiated by forming the Hospital Purchases Groups (Kaszyński, Federwoski, 2011)[12], whose aim is aggregating the demand of many entities. This demand gives the greater tender sales force to suppliers. In consequence, it is possible to achieve results in the form of, among others, lower purchase prices, better customer service and standardization as well as the unification of the assortment used by various hospital facilities (Bartkowiak, Domański, 2013: 12). Striving for the effectiveness increase in the framework of a group requires conducting the number of administrative and negotiation works, which usually are transferred to an external logistics operator (i.e. in the form of a public and private partnership) (Grüb, 2009: 83).

The cooperation with a logistics operator does not have to be limited to the purchases, but it can include also (Bartkowiak, Domański, 2013: 13):

legal support for a group members,

- coordination of clinical research conducted in medical institutions,
- financial and managerial consulting.

The bases for the cooperation with a logistics operator are as follows:

[12] The purchase group is a voluntary institution of buyers who link their demands in order to achieve better position in negotiations and obtain better terms.

counseling and shaping the positive relations with customers. However, the selection of a good operator is the main problem. Before signing a contract with a private logistics operator, the medical care facility should not only confirm the operator's experience in the scope of delivering the services to the health care institution, but also analyze his infrastructure and personnel resources.

Positive examples of employing good logistics operators serving the medical institutions in Europe and can be multiplied. For instance, the St. Francis Polyclinal Hospital in Munster in Germany is handled by the specialized in medical services logistics operator *Fige*[13]. Thanks to the logistic services outsourcing, a hospital achieves savings in the scope of logistics at the level of 20-25% (http://logistyka.infor.pl).

Another example is the coordination in the scope of the public logistics - *NetLog*Hanover -established among clinics of this region, Medical College and the *Rhenuseonova* Company. The first contract between a logistics operator and the Health Care Service was signed in 2005. The project value amounted for 5 billion Euros. Implementing the new health care supply system, which improved the quality and effectiveness of the hospital logistics, was the aim of the partnership.

Although the benefits of implementing the public logistics in hospitals are undeniable, however, this method of hospitals' functioning in Poland has not been adopted yet. Although, the first attempts of transferring the logistic tasks and sharing the experiences of the specialized external companies are visible[14]. There is still the lack of delegating all tasks to the specialized logistic operators. Hospitals still have the skeptic attitude towards this kind of solutions and they manage the supplies themselves, what does not bring positive results, especially when taking into account a big number of hospitals. Such a situation seems to be a consequence of: the weak awareness of benefits that hospitals would obtain thanks to the cooperation with a logistics operator, the lack of confidence and the interdisciplinary education of the managerial staff. In Poland there exists the conviction that the medical entities should be managed by the medical profession representatives. The experience shows that the logistic competences and the support of the advanced information technology are required (Szołtysek, Twaróg, 2011: 316). Observing the subsequent proprietary transformations and re-

[13] The Hospital Group consists of 14 catholic hospitals, 7 facilities taking care of the elderly and disable people; it possesses shares in many rehabilitation facilities, nursing homes and hospices.

[8]The Fige company delivers services for hospitals also in the Benelux countries, Italy, it is going to enter the Polish market.

[14] i.e. The University Hospital in Bydgoszcz, which in 2011 entered into cooperation with the external company in the scope of cleaning and hiring the hospital linen.

structuring processes, in the framework of which the first attempts of co-operation with the external suppliers are undertaken, it can be stated that in the near future the hospitals management will only concentrate on the key competences and will delegate the majority of the logistic tasks to the appropriate operators.

Conclusions

The problem of applying the public logistics in the implementation of objectives and processes connected with delivering the medical services has been discussed in this paper. The benefits resulting from the hospitals' concentration on the key competences and the transfer of the supportive actions (logistic services) to the specialized logistics operators have been presented. The presented hospitals' good practices explain the legitimacy of implementing the public logistics and they also visualize the logistics' potential in the cost reduction. Although, the benefits are undeniable, the Polish hospitals management's attitude towards this form of the supportive processes implementation is still skeptical. But hopefully, the pressure to reduce costs resulting from the smaller number of contracts with the National Health Fund will force the hospitals management to implement the public logistics and to share the experiences of the business practice.

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