

# Drawing Up a Logistics Model of a Medical Institution Management System

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**Abstract:** the article deals with the issues of minimizing the doctor's costly actions through high-quality regulation of the medical and diagnostic process and the widespread introduction of economic regulators of the medical and diagnostic process into healthcare practice.

**Keywords:** Healthcare logistics, medical facility, medical services, medical personnel, patient care, patient flow.

A medical institution is a system in which various types of flows move, starting with the flow of patients, as well as related information, and ending with financial and material flows that ensure the provision of medical services in the right place, at the right time, in the required volume and with a predictable level of quality. This makes it possible to implement the basic rule of logistics and its application in healthcare. The logistics approach to management includes: bringing the real structure of medical care into line with the needs of the population through effective management of flow processes in healthcare; optimizing the structure and volume of medical care based on adequate financing of the industry; widespread introduction of economic regulators of the medical and diagnostic process into healthcare practice, distribution of budget resources between healthcare institutions in accordance with their capabilities; formation of relevant information in the medical institution that ensures the effectiveness of management; minimization of costly actions of the doctor through high-quality regulation of the treatment and diagnostic process.

Logistics uses the following approaches to manage flow processes: operational management, which ensures the implementation of all work processes with minimal total costs – production costs, including the purchase of material resources, sales and promotion of medical services; subordination of the organization, planning and management in all areas of production activities to the "just in time" principle, everything is purchased, produced, etc. release to the consumer "just in time"; increasing the speed and accuracy of movement of a specific consumer of a medical service in the process of its production by dispatching flow processes using modern computer technologies; monitoring and evaluating material flows, organizing their regulation from the moment of entering the production cycle to the final use in it up to the final consumer of a medical service, which promotes strengthening of ties

between medical institutions and suppliers of material resources; target setting of health care institutions to the needs of individual patients, corporate clients, development of contractual relations with large and small customers of medical services; development of horizontal relationships between medical institutions, when they are forced to compete with each other in the process of customer service, trying to maximize the quality of their medical product, using minimal resources for this purpose, which leads to simplification (acquisition of a horizontal character) of multi-level hierarchical management structures; continuous implementation of logistical innovations with an assessment of the consequences of decisions made, their impact on functional costs, on revenues from the sale of medical services in order to achieve a competitive advantage for a medical institution.

The development of the logistics approach in the management of medical organizations is largely determined by patient care at the final stage of the logistics chain. At this stage, two threads interact: 1. the flow of medical services provided by teams of medical institutions (medical personnel), 2. the flow of patients who need these services. Moving medical personnel to non-transportable patients: calling a local doctor at home; emergency medical care; disasters, epidemics, etc.

During the development of plans, the following types of work are carried out: collecting information on the compared treatment and prevention facilities; making adjustments to the volume of medical care; studying the existing patient flows and analyzing options for optimizing them in terms of resource use; selecting and approving rational options. Polyclinic doctors should be involved in planning the volume of inpatient care. They should periodically assess the amount of hospitalization required and the approximate length of stay of patients in hospitals, eventually reaching the preliminary request for a certain number of bed days. This means that polyclinics plan in advance the number of bed days for their patients with a guarantee of payment for the agreed volumes of hospitalizations based on the cost of completed treatment cases.

A preventive action plan should be an integral part of organizing patient flows. At the same time, it is necessary to estimate the costs of their implementation and the economic effect. A special place in the plan of organizing patient flows is given to the program of work with the elderly and disabled population. This part of the program should be linked to social protection agencies. One of the ways to improve the quality of healthcare is to introduce an annual medical examination of the entire population.

Currently, for the modernization of healthcare, the need for rational use of resources involved in various patient service flows is taking on an innovative meaning. Innovations aimed at improving the efficiency of resource use should be carried out taking into account their medical, economic and social efficiency.

Adaptation of medical institutions to the market economy. The head of the healthcare institution plans and controls the expenses of the healthcare institution, and the main amount of expenses is made by the attending physician. At the same

time, the chief physician, who is a health care organizer, cannot quickly assess the legality of the actions of the attending clinician (usually costly). And the attending physician, due to the lack of economic incentives in his work, is not interested either in improving the quality of medical care or in the rational use of resources. There is a contradiction between the clinical and economic components of the treatment and diagnostic process. The administration of a medical institution mainly manages subsystems for providing supplies, medicines, equipment, purchases, repairs, etc.

The activity of the production subsystem, that is, the course of the medical and diagnostic process itself, occurs independently of the administration. The management of a medical institution does not participate in the planning and implementation of specific procedures for providing medical care, cannot objectively judge the adequacy of the functioning of organizational structures in the current period of time, the correctness of medical actions; it also does not have the ability to fully monitor the correctness of the implementation of medical and diagnostic measures and draws conclusions about the effectiveness of the main production activities of the institution only after the fact based on indicators that only indirectly reflect the essence of the process. The essence of adaptation of medical institutions to a market economy is their readiness and ability to quickly adapt and function successfully in a constantly changing competitive environment, which is formed under the complex influence of political, economic, social, legal, cultural and other factors affecting the work of a medical institution at a given time. For the economic adaptation of a medical institution to market conditions, it is necessary to: determine adequate financing of medical services, taking into account their cost and the required level of quality; improve financial and economic relations in the industry, aimed at improving the efficiency of resource use, structural reorganization, improving the quality and culture of medical care, including the development and implementation of a unified system of quality of medical care based on medico-economic standards; creation of tools for calculating the cost of local and territorial programs for combating certain types of diseases and evaluating the effectiveness of these programs; prevention of economic risk, i.e. the possibility of losing part of its assets by a healthcare institution, minimizing income or incurring additional costs as a result of industrial and commercial activities.

The administrative way of adapting a medical institution to the market involves: creating a flexible organizational and staff structure that would allow the administration to quickly adapt it to constant fluctuations in demand for medical services; radical reform of the personnel service, its real participation in making decisions on the selection, placement and appointment of personnel based on scientific achievements in the field of management (personnel management), psychology, sociology and law; development of the principles of continuity and continuity of the medical and diagnostic process.

The information way of adapting a medical institution to the market involves: using the most advanced technologies and automated management systems, including

an automated management accounting system; creating a permanent all-Russian system for monitoring public health and social and hygienic monitoring based on modern computer technologies; dispatching and regulating the flow of patients, information, finances, material and technical resources with the help of the state-of-the-art using computer technology.

The psychological way of adapting a medical institution to the market has the ultimate goal of increasing the level of social maturity of medical teams through the creation of corporate associations that will help to fully use stimulating psychological motivations, taking into account the individual characteristics of employees. This should strengthen the production capacity of the medical institution and stop the outflow of highly qualified personnel from the healthcare system.

Improving the level of adaptation of healthcare institutions to the market based on a logistics approach to management: bringing the real structure of medical care in line with the needs of the population through effective management of flow processes in healthcare; optimization of the structure and volume of medical care based on adequate financing of the industry; widespread introduction of economic regulators of the medical and diagnostic process into healthcare practice, distribution of budget resources between healthcare institutions in accordance with their capabilities; formation of relevant information in the medical institution that ensures management efficiency; minimization of costly actions of the doctor through high-quality regulation of the medical and diagnostic process.

Building a logistics model of a medical institution management system: the operation of any medical institution as an economic unit of the healthcare system is ensured by the functioning of a whole complex of various flow processes; logistics considers flow not as an abstract form of movement of any materialized objects, but as a concrete object that arises and develops according to certain laws, having its own parameters.

Logistics uses the following approaches to manage flow processes: 1. Operational management that ensures the implementation of all work processes with minimal total costs – production costs, including the purchase of material resources, sales and promotion of medical services; 2. Subordination of the organization, planning and management in all areas of production activities to the principle of "just-in-time": everything is purchased, produced and released to the consumer "just in time"; 3. Increasing the speed and accuracy of movement of a specific consumer of a medical service in the process of its production by dispatching flow processes using modern computer technologies; 4. Monitoring and evaluating material flows, organizing their regulation from the moment of entering the production cycle to the final use in it up to the final consumer of a medical service, what contributes to strengthening the ties of a medical institution with suppliers of material resources; 5. Target setting of health care institutions for the needs of individual patients, corporate clients, development of contractual relations with large and small customers of medical services; 6. Development of horizontal relationships between medical

institutions, when they are forced to compete with each other in the process of customer service, trying to maximize the quality of your medical product, spending minimal funds for this, which leads to flattening (acquiring a horizontal character) multi-level hierarchical management structures; 7. Continuous implementation of logistics innovations with an assessment of the consequences of decisions made, their impact on functional costs, on revenues from the sale of medical services in order for a medical institution to achieve a competitive advantage.

Using the above approaches to management allows: to increase the competitiveness of a medical institution by reducing overall costs and increasing profitability from business activities; to effectively implement general management goals and increase the value of a medical institution in the eyes of real and potential consumers, executive authorities, owners and investors; to expand the opportunities for price and non-price competition of medical institutions; to introduce marketing approach – focus on the consumer, on the quality of its services; improve all the flow processes of a healthcare institution so that its strategic goals are achieved in the best possible way; predict the demand for medical services and determine the need for resources for their provision, manage supplies of consumables and medicines, optimize the location of production of services and auxiliary premises, rationalize routes of various types of flows; implement the concept of universal quality management or Total Quality Management.

In general, the logistics approach applied at all stages of the production process from supply to distribution and sales helps to achieve maximum management efficiency, high indicators of not only final, but also intermediate results of the production and economic activities of a medical institution Building a logistics model of the medical institution management system makes it possible to solve the problem of effective organization of patient flows, timely localization of problem areas road sections and road users, placement of equipment, movement and distribution of material resources, creation of appropriate infrastructure on routes, etc.

Based on the logistics model, the main conditions for implementing a logistics management system can be formulated: 1. Parameterization of medical institution flows and their monitoring; 2. Determining the regularities of the functioning of the production environment based on the regulations; 3. Determination of points for dispatching streaming traffic in order to improve the quality of operational management; 4. Selecting a solution option based on comparing flow parameters with the state of frames, technologies used, and resources in a specific area of the production environment.

From all this, we can draw the following conclusion:

1. Using the logistics approach, it is possible to identify structural divisions of the institution where problem situations may arise.
2. Effective management of flow traffic in these places requires the organization of control points, a strict system of staff labor rationing, detailed and adequate

regulations of activities that will ensure the dispatching of flows based on the selected parameters.

3. Effective operational management can serve as an objective basis for developing a marketing strategy and policy of a healthcare institution, make it possible to purposefully plan the work of offices and staff, determine priorities in the order of technical re-equipment of workplaces, etc.

**References:**

1. Акопян А.С., Дарсигова Р.Б., Шиленко Ю.В. Проблемы структурного реформирования здравоохранения: отношение руководителей и специалистов/ Проблемы управления здравоохранением. М.: 2002. - № 4(5). – С. 26-32.
2. Бауэрсокс Д.Дж., Клосс Д.Дж. Логистика: Интегрированная цепь поставок. Пер. с англ. – М.: «Олимп-Бизнес», 2001. – 640 с.
3. Бокерия Л.А., Лищук В.А. Формирование концепции здравоохранения с использованием современных информационных и интеллектуальных средств. / Информационные системы и технологии в здравоохранении: Научные труды Российской научно-практической конференции. 28-29 мая 2003 г. – М.:РИО ЦНИИОИЗ, 2003 - С. 25-29.
4. Основы фармацевтической логистики: учеб. пособие / Г.Н. Андрианова, А.А. Каримова, И.П. Давыдов, А.Л. Петров; ФГБОУ ВПО УГМУ Минздрава России. – Екатеринбург : Издательство УГМУ, 2016. – 160 с.
5. <https://www.book.ru/book/920485>
6. <https://www.books-up.ru/ru/book/farmaceuticheskaya-logistika-aptechnogo-sklada-14826543/>