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Қорытындылай келе, осы айтылған ұсыныстар болашақта іске асырылатын болса, Қазақстан Республикасындағы жұмыссыздар саны азаяды деген ойдамыз. Сондай -ақ, осы арқылы еліміз жақсы нәтижелерге қол жеткізері анық.

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ECONOMIC ANALYSIS OF THE MODERNIZATION OF THE HEALTHCARE SYSTEM OF THE REPUBLIC OF KAZAKHSTAN

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Abstract. In modern realities, special attention is paid to the transition of the healthcare system to the insurance model of such a system, there is a permanent increase in the number of jobs in the public medical sector due to the transition of doctors to work in private clinics. A similar transition to a new system determines the relevance of the chosen topic, as well as insufficient scientific development. The purpose of this paper is to study the modern development of the healthcare system of the Republic of Kazakhstan. Using the method of analysis, the article demonstrated the state of the modern healthcare system in the Republic of Kazakhstan, and considered the main indicators of the healthcare system of Kazakhstan. The authors describe the healthcare services in the Republic of Kazakhstan in 2019-2020. The authors concluded that the industry could allocate additional funds subject to necessary conditions. Thus, it was calculated how much additional funds from the state budget can be allocated with effective restructuring of expenditures. The problems were considered, and the prospects were determined to develop and modernize the healthcare system in Kazakhstan and to introduce a new allocation model of healthcare resources.

Keywords: healthcare services, economy, state, medical care.

Problem formulation. In modern realities, special attention is given to the transition of the healthcare system to the insurance model of organizing such system, there is a permanent increase in the number of jobs in the public medical sector by switching doctors to work in private clinics. A similar transition to a new system, as well as insufficient scientific elaboration determines the relevance of the chosen topic, as well as insufficient scientific development

The aim of the study is the study of the modern development of the healthcare system of the Republic of Kazakhstan, analysis and identification of industry problems, as well as consideration of issues of economic modernization of the system as a whole.

Research Methods. The methods of verification, comparative analysis, and monitoring of the main empirical approach have been applied. The official statistical data and information potential of the Internet have been used.

Introduction

The health of each person, being a component of the health of the entire population, becomes a factor determining both the usefulness of its existence and the potential of its capabilities. The socio-economic, cultural and industrial development of the country depends on the level of the health of the people. From the point of view of sustainable and stable growth of the welfare of the population, the healthcare industry, which is a single developed socially oriented system designed to ensure accessibility, timeliness, quality and continuity of medical care, is one of the main priorities of our state, related to strategic goals.

The issues of the economic organization of the healthcare system are always relevant and scientists raised it more than once. The analysis of scientific literature in the field of health economics is considered in the works of V.Z. Kucherenko [1], R.B. Saltman and J. Figueiras [2], D. North [3], A.A. Gvozdenko [4], as well as many others. Many scientists pay special attention to the transition and modernization of the healthcare system to the insurance model. This transition and insufficient scientific development determine the relevance of the chosen topic. Thus, the purpose of the paper is to analyze the current state of the healthcare system of the Republic of Kazakhstan, identify the main problems, solve them and modernize the healthcare system.

Medicine requires constant modernization, and already today all the equipment purchased over the past 5-10 years is becoming morally and physically obsolete, and this requires certain and considerable costs. When considering these problems, a simple solution suggests itself in the form of allocating additional funds from the budget to the required amounts and continuing the practice of financing the industry on a residual basis, which is still the case. Many countries, primarily in the Arab world, maintain such a model, but all analysts agree on the extensive path of health care development [5], despite its sociality and universality in ensuring public access to medical services, eventually still faces the problem of the country's financial capabilities not matching its commitments. Therefore, various financing mechanisms are being actively introduced in the healthcare system of various countries, allowing the industry to solve internal problems at the expense of its reserves, which is possible only in market conditions.

According to the World Health Organization (WHO), up to 40% of health care funds are spent inefficiently, and this is typical for all countries [6; 7]. In market conditions, when medical practice is considered as a business, hospitals and polyclinics are interested in increasing their services with the introduction of expensive and profitable directions. This explains the rapid development of cardiac surgery and transplantology in our country, where conditions were created through an attractive tariff for the development of competition among suppliers. The situation is similar in hemodialysis, oncology, endoprosthetics, etc.

Economic analysis of medical services in the Republic of Kazakhstan

Improving the quality management of medical services occupies an important place in the context of the strategic development of healthcare in Kazakhstan [8]. Table 1 shows the main health indicators of Kazakhstan in 2010-2019. Systematical work in the field of healthcare of the Republic of Kazakhstan has made it possible to improve the accessibility of the population to a guaranteed volume of free medical care, to increase the efficiency and quality of medical examination of patients.

Table 1. Key health indicators of Kazakhstan in 2010-2019

Indicators	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of pediatricians	6495	6660	6663	6547	6265	5554	5421	5254	5091	4950
per 10,000	14.8	14.8	13.4	12.1	12.1	10.5	11.2	10.3	9.7	9.3

children aged 0-14 years										
Number of beds for children,	19546	19407	19519	19069	18621	18571	18227	18237	18332	19355
per 10,000 children aged 0-14 years	48.5	46.7	45.4	42.8	40.2	38,7	36,7	35,7	34,9	36,4
The number of hospitalized children, thousands	567.6	588.0	601.4	617.9	591.8	616.7	618.5	653.5	668.5	667.1
per 10,000 children aged 0-14 years	1426.9	1436.5	1422.3	1410.6	1302.1	1308.3	1246.1	1278.9	1273.2	1256.0

Note: compiled by the author based on the source [9].

In the world ranking on the level of healthcare published in 2018 by the world's largest Numbeo database, Kazakhstan ranked 53rd among 93 countries [10]. At the same time, Kazakhstan has the highest quality index of the healthcare system among the CIS countries. The indicators of the Republic of Kazakhstan are inferior to Belarus (59th place), Russia (63rd place), Ukraine (78th place) [11] and Azerbaijan (91st place). The rating evaluates the quality of the health care system, equipment, the level of professionalism of medical workers and health professionals, the cost of service in clinics and other indicators. The TOP 5 best countries in the world included Taiwan, South Korea, France, Japan and Denmark [12]. In January-July 2020, the country provided health services for tenge or 19.2% more than a year earlier. Including 80.4% of services were provided at the expense of the budget, 11.8% at the expense of the population, and 7.8% at the expense of enterprises (Table 2).

For comparison: in the first half of 2019, the volume of services amounted to 628.6 billion tenge, an increase of 17.1% over the year. In the context of the regions, the largest volume of services rendered in the field of healthcare fell on Almaty: 128.5 billion tenge – 22.6% more than a year earlier. Nur-Sultan (104.2 billion tenge, plus 10.1%) and the Karaganda region (53.1 billion tenge, plus 24%) are on the second and third lines. The leading three accounted for more than a third of the total volume of services rendered in the country.

Table 2. Volume of services rendered in the field of healthcare in January-June 2019-2020 (billion tenge)

Indicators	Total		Growth to total		Share of the Republic of Kazakhstan	
	2020	2019	Billion tenge	%	2020	2019
Kazakhstan	749.2	628.6	120.6	119.2	100.0	100.0

Almaty	128.5	104.8	23.7	122.6	17.2	16.7
Nur-Sultan	104.2	94.7	9.5	110.0	13.9	15.1
Karaganda	53.7	41.8	11.9	128.5	7.2	6.6
Almaty	52.5	43.5	9	120.7	7.0	6.9
East Kazakhstan	51.2	42.4	8.8	120.8	6.8	6.7
Shymkent	45.7	37.9	7.8	120.6	6.1	6.0
Turkestan	45.4	34.4	11	132.0	6.1	5,5
Pavlodar	33.7	27.9	5.8	120.8	4.5	4.4
Zhambyl	31.4	26.9	4.5	116.7	4.2	4.3
Kyzylorda	30.6	24.9	5.7	122.9	4.1	4.0
Kostanay	27.4	24.6	2.8	111.4	3.7	3.9
Aktobe	27.2	24.1	3.1	112.9	3.6	3.8
Mangystau	25.4	18.4	7	138.0	3.4	2.9
West Kazakhstan	24.4	20.6	3.8	118.4	3.3	3.3
Atyrau	23.8	20.5	3.3	116.1	3.2	3.3
Akmola	23.7	22.2	1.5	106.8	3.2	3.5
North Kazakhtanskaya	20.8	17.9	2.9	116.2	2.8	2.8

Note: compiled by the author based on the source [9].

Half of the total volume of services in the sector accounted for the activities of hospitals. Including surgical departments of hospitals provided services for 80.1 billion tenge, gynecological departments and maternity hospitals for 37.3 billion tenge, and psychiatric hospitals for 16.8 billion tenge (Table 3).

Table 3. Volume of healthcare services rendered in Kazakhstan in January-June 2019-2020 (billion tenge)

Indicators	Total		Growth to total		Share of the Republic of Kazakhstan	
	2020	2019	billion tenge	%	2020	2019
Total	749.2	628.6	120.6	119.2		
Hospital services	385.9	341.9	44	112.9	51.5	54.4

Services of surgical departments of hospitals	80.1	72.6	7.5	110.3	10.7	11.5
Services of gynecological departments of hospitals and maternity hospitals	37.3	35.4	1.9	105.4	5.0	5.6
Services of psychiatric hospital	16.3	13.2	3.1	123.5	2.2	2.1
Services of rehabilitation centers	11.9	14.7	-2.8	81.0	1.6	2.3
Hospital services provided under the supervision of doctors, other	24.4	21.3	3.1	114.6	3.3	3.4
Services of other hospitals	215.4	184.6	30.8	116.7	28.8	29.4
Services in the field of general medical practice	157.8	120.5	37.3	131.0	21.1	19.2
Medical practice services	44.7	41.7	3	107.2	6.0	6.6
Dental services	19.8	19.7	0.1	100.5	2.6	3.1
Other human health services	141	104.8	36.2	134.5	18.8	16.7

Note: compiled by the author based on the source [9].

Another 21.1% of services, or 157.8 billion tenge, were allocated for general medical practice, 31% more than a year earlier. The services of specialized medical practice accounted for 44.7 billion tenge, and dentistry services for 19.8 billion tenge.

Features of the Kazakhstan model of Compulsory Social Health Insurance (CSHI)

Healthcare is one of the first to feel the negative effects of fluctuations in the economy, especially during its recession and crisis. During the period of economic growth, the state assumes increased obligations to provide citizens with high-quality medical care: it builds new hospitals, buys expensive equipment, creates costly infrastructure, and expands the list and volumes of services that are covered by the budget. When a period of economic difficulties comes, the time comes for a difficult choice between these guarantees, the obligations assumed and financial opportunities. The current situation in Kazakhstan and the existing problems are connected with this factor. The amount of funds allocated by the state for the provision of medical care for 2020 is over 917 billion tenge, which is about 2% of the gross domestic product (GDP) of the country. Over the past 10 years, the largest amount of funding was allocated in 2009 and amounted to only 2.6%. Since then, financing has steadily declined as a percentage of GDP and has reached a level where financing no longer

covers most of the needs of the population and a number of state guarantees become a simple declaration.

On average, the countries of the Organization for Economic Cooperation and Development (OECD) spend about 8% of GDP on healthcare, and according to WHO recommendations, health care costs should be at least 7%, otherwise the share of illegal payments in the system increases [13]. Of course, in the current conditions of the economic crisis, the state has chosen to establish joint responsibility for health protection between him, the employer and the citizen himself by creating a Social Health Insurance Fund. Countries with developed economies have never had free, low-cost healthcare, and they have historically gone from a universal paid to an insurance model with a gradual increase in the share of government spending for socially vulnerable categories of the population. Therefore, the model of Compulsory Social Health Insurance (CSHI) adopted by Kazakhstan differs from the classical insurance model. In fact, any model ultimately pursues one goal – to ensure that the state's obligations are balanced with the available resources and those models that provide flexibility in resource management depending on the demand of the population and are patient-oriented are considered the most successful.

The total deficit of the republic's healthcare is more than 800 billion tenge. For example, at the level of polyclinics, only 1994 types of medical services are provided, for which 955 tenge is allocated for each person attached to the polyclinic. The actual consumption by the population is 2521 tenge, that is, the country's polyclinics are underfunded by 527 tenge for each attached resident. Nationwide, this deficit is 358 billion tenge. The country's hospitals receive 126 billion tenge less, outpatient drug provision - 64.3 billion tenge, oncology - 21 billion tenge, etc. The problem is not only that little money is allocated, but also that it is impossible to cover all health care costs by the state alone, especially in a crisis. Therefore, a fair question arises: which of the obligations previously given by the state could be excluded from the list.

First, the state suspended the construction of large hospitals and polyclinics and transferred them to the principles of public-private partnership (PPP) [9]. However, PPP presupposes the stability of the economy and guarantees of the state, which is impossible in a crisis, which explains the slowdown in the development of PPP in the country [10]. The purchase of expensive equipment was suspended, and the privatization of healthcare facilities has begun. However, these measures will not be able to provide the industry with adequate financing in any way. Taking into account the growing needs of the population associated with an increase in population, life expectancy and many other factors, health costs will only grow.

An analysis of current healthcare costs shows that, if the necessary conditions are created, additional funds may be released within the industry itself. For example, the average hospital stay of a patient is 6.8 days in OECD countries, 4 days in Turkey; more than 70% of patients are in hospital for only one day in the UK. 8.3 days in Kazakhstan. Reducing this indicator to the average level of the OECD countries would allow the industry to save and redistribute about 49 billion tenge across the country [10; 13; 14]. However, this is unprofitable for hospitals, since there is no economic motivation to reduce costs. In addition, 869 diagnoses are treated in our hospital, when they are treated successfully in polyclinics all over the world. If the necessary conditions were created and these diagnoses were brought to the level of polyclinics, more than 17 billion tenge would be released. When referring a patient to planned treatment, we conduct a patient study on more than 20 parameters, some of which are then duplicated in the hospital, creating a queue both there and there. Optimization of this process would allow freeing up 6 billion tenge. Revision of expensive and outdated principles of medical examination would save the state about 40 billion tenge, etc.

Thus, it is calculated that by restructuring expenses, over 200 billion tenge can be redirected to priority areas of the industry without attracting additional funds from the budget, namely, to increase tariffs for primary health care, hospitals, the development of high-tech types of medical services, etc. However, this requires a number of regulations for these processes. Having certain resources,

knowing the need and the amount of the deficit of funds, there is a need to find additional sources of financing, which is possible only in the conditions of the introduction of compulsory medical insurance. However, it should be noted that according to the payments established by the Law "On Compulsory Social Health Insurance", it would not be possible to satisfy the needs of both the population and the industry as much as possible in the near future. According to the approved growth rates of financing of the industry, Kazakhstan will reach 2.4% of GDP only in 2021, which means that the resource-saving regime will be in effect for a long time. In the current conditions, when hospital services are paid for each treated patient, that is, each patient is a carrier of funds for the hospital, illegal payments continue to be collected, and clinic managers note a chronic shortage of funds.

The first experience of purchasing hospital services in a competitive environment has shown that there is a significant difference between the administration of funds and management methods between public and private clinics. The administrative and managerial staff of one of the regional hospitals consists of over 50 employees to support the activities of 32 doctors in the northern region, while the head of the organization has 4 deputies, and 5 in a number of hospitals. The salary fund of management personnel exceeds the total amount of salaries of all hospital doctors. Of course, in such conditions, doctors are not motivated to improve the quality of their work, since they receive crummy salaries for the number of hours spent in hospital [15].

For comparison: in one of the private medical centers, there are only 12 employees of the management staff for more than 200 working doctors, and doctors receive salaries as a percentage of the number of treated patients, while the higher the professional level of the doctor, the higher the percentage [16]. Therefore, the transition of doctors from public to private clinics will be endless until equal conditions are created for all participants of the system to receive budget funds, and only competition between them will allow the entire system to be oriented to the needs of the patient. However, observing the golden mean in this process is very important, since the transformation of medicine into a business is always fraught with commercialization of the relationship between doctors and patients, who often cannot to assess the quality of treatment and diagnosis.

Conclusions

In the conditions of commercialization, overdiagnosis and the appointment of an excessive number of drugs simultaneously become the main problem of the industry, and third-party supervisors and experts are needed to curb this process, which are specialized state clinics, as well as independent experts of the Health Insurance Fund. This explains the reason for the rejection of the complete denationalization of medicine in many countries.

The correct allocation of resources, the maximum emphasis on resource conservation and obtaining additional sources of financing make it possible to ensure the stability and stability of the functioning of healthcare as a whole, which allows solving the key problems of the industry without additional costs from the state, which is very important in the crisis. In this matter, the role of the fund as a catalyst for change and a strategic buyer of services plays a primary role, and the results of this work will be really felt in the next 5 years after the full-scale implementation of a new model for the allocation of health resources.

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