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THE HEALTHCARE SYSTEM PERSONNEL PROVISION AS A PREREQUISITE FOR THE TRANSITION TO THE KNOWLEDGE ECONOMY

One of the basic principles of the knowledge economy is the availability of labor resources. This principle is especially important for the healthcare system, where the life and health of people depend on the qualifications and skills of doctors. In Russia, as in many other countries, there is a shortage of doctors, which has worsened during the COVID-19 pandemic. The purpose of the study is to analyze the staffing of the Russian healthcare system, on the basis of which to propose ways to overcome the shortage of personnel in it. Traditional methods of quantitative analysis were used in the work. Secondary data from the information and analytical system of the Federal State Statistics Service of the Russian Federation served as data sources. The study of the personnel component of the health care system in Russia revealed that the shortage of personnel is typical, first of all, for regions with a low standard of living of the population. There are also disproportions in the various specialties of training. In general, the Russian health care system is characterized by a low level of remuneration with its high intensity. The Russian Government is making significant efforts to eliminate the problem, but these measures do not give the expected effect. The practical significance of the work lies in the development of specific recommendations for the authorities to address the shortage of personnel in the health care system. As measures, it is proposed to use the Soviet experience of planning in the health care system (centralization of planning). At the same time, it is worth paying attention to the best practices of other countries. Only using an integrated approach, it is possible to overcome the problem of shortage of personnel in Russian healthcare and make the transition to a knowledge economy.

Key words: healthcare system, shortage of personnel, knowledge economy, public policy.

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Денсаулық сақтау жүйесін кадрмен қамтамасыз ету – білім экономикасына өтудің қажетті шарты ретінде

Білім экономикасының негізгі принциптерінің бірі-еңбек ресурстарының болуы. Бұл қағида Денсаулық сақтау жүйесі үшін өте маңызды, мұнда адамдардың өмірі мен денсаулығы дәрігерлердің біліктілігі мен дағдыларына байланысты. Ресейде, көптеген басқа елдердегідей, COVID-19 пандемиясы кезінде күшейген дәрігерлер тапшылығы мәселесі бар. Зерттеудің мақсаты-Ресейдің Денсаулық сақтау жүйесінің кадрлармен қамтамасыз етілуіне талдау жасау, соның негізінде ондағы кадрлар тапшылығын жеңу жолдарын ұсыну. Жұмыста сандық талдаудың дәстүрлі әдістері қолданылды. Деректер көзі Ресей Федерациясының Мемлекеттік статистика федералды қызметінің ақпараттық-аналитикалық жүйесінің екінші деректері болды. Ресейдің Денсаулық сақтау жүйесінің кадрлық компонентін зерттеу кадр тапшылығы, ең алдымен, халықтың өмір сүру деңгейі төмен аймақтарға тән екенін анықтады. Сондай-ақ әртүрлі дайындық мамандықтары бойынша диспропорциялар бар. Жалпы, ресейлік Денсаулық сақтау жүйесі жоғары қарқындылықпен төмен жалақы деңгейімен сипатталады. Ресей Үкіметі мәселені шешуге айтарлықтай күш салуда, бірақ бұл шаралар күтілетін нәтиже бермейді. Жұмыстың практикалық маңыздылығы Денсаулық сақтау жүйесіндегі кадр тапшылығын шешу үшін билік органдарына нақты ұсыныстар әзірлеу болып табылады. Шаралар ретінде денсаулық сақтау жүйесінде кеңестік жоспарлау тәжірибесін қолдану ұсынылады (жоспарлауды орталықтандыру). Бұл ретте басқа елдердің озық тәжірибесіне де назар аударған жөн. Тек кешенді тәсілді қолдана отырып, Ресей Денсаулық сақтау саласындағы кадрлар тапшылығы мәселесін еңсеруге және білім экономикасына көшуге болады.

Түйін сөздер: денсаулық сақтау жүйесі, маман тапшылығы, білім экономикасы, мемлекеттік саясат.

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Обеспечение кадрами системы здравоохранения как необходимое условие перехода к экономике знаний

Одним из базовых принципов экономики знаний является наличие трудовых ресурсов. Этот принцип особенно важен для системы здравоохранения, где от квалификации и навыков врачей зависят жизнь и здоровье людей. В России, как во многих других странах, существует проблема дефицита врачей, которая обострилась в период пандемии COVID-19. Цель исследования – провести анализ кадровой обеспеченности российской системы здравоохранения, на основе чего предложить пути преодоления дефицита кадров в ней. В работе были использованы традиционные методы количественного анализа. В качестве источников данных послужили вторичные данные информационно-аналитической системы Федеральной службы государственной статистики Российской Федерации. Изучение кадровой составляющей системы здравоохранения России позволило выявить, что кадровый дефицит характерен, в первую очередь, для регионов с низким уровнем жизни населения. Также имеются диспропорции по различным специальностям подготовки. В целом для российской системы здравоохранения характерен низкий уровень оплаты труда при его высокой интенсивности. Российское Правительство предпринимает значительные усилия для устранения проблемы, однако данные меры не дают ожидаемого эффекта. Практическая значимость работы заключается в разработке конкретных рекомендаций для органов власти по решению кадрового дефицита в системе здравоохранения. В качестве мер предлагается использовать советский опыт планирования в системе здравоохранения (централизация планирования). При этом стоит обратить внимание и на передовой опыт других стран. Только используя комплексный подход, можно преодолеть проблему дефицита кадров в российском здравоохранении и осуществить переход к экономике знаний.

Ключевые слова: система здравоохранения, дефицит кадров, экономика знаний, государственная политика.

Introduction

The transition to a knowledge economy was proclaimed as one of the priority areas for the development of the Russian economy. Despite all the difficulties and consequences of the COVID-19 pandemic, it gave impetus to the development of a new type of economy. In recent years, there has been a rapid growth in developments in the field of medicine.

At the same time, the pandemic gave impetus to qualitative changes in this area: new vaccines were developed in a short time, including against such deadly diseases as HIV infection, significant success was achieved in the field of implantation of various parts of the body, the whole world united against the pandemic (Mishchenko I.V., 2022: 80). The pandemic has exposed a number of important health issues around the world. And the main one is the lack of medical staff. According to WHO estimates, it is the personnel who are entrusted with the main task of maintaining a high level of health development in any country. And the key task of states is to create favorable conditions for attracting and retaining staff (World Health Organization, 2022: 54). This task is also facing the Russian healthcare system.

The purpose of the study is to analyze the staffing of the Russian healthcare system, on the basis of which to propose ways to overcome the shortage of personnel in it.

Research objectives:

- assess the staffing of the Russian health care system;
- to determine the factors that influence the distribution of labor resources in the healthcare system of Russia;
- suggest ways to overcome the shortage of personnel in Russian medical organizations.

The object of this scientific research is the human resources of the healthcare system in Russia, the subject is the methods of forming the personnel component of the healthcare system.

To conduct this study, traditional methods of comparative analysis were used (comparison of social processes to detect their similarities or differences).

Before the study, the following hypothesis was put forward: “A generally accepted approach is used in the formation of public health policy. This increases the outflow of personnel from one region to another. We believe that it is necessary to use a differentiated approach when developing measures

to prevent a shortage of personnel in the Russian healthcare system.”

Literature review

In foreign literature in the field of health care staffing, the main focus is on the education system and planning of future personnel. So, we can distinguish two directions for planning the system of labor organization in health care. The first direction is connected with the personnel planning mechanism. Representatives of this area analyze the quantitative parameters of personnel in health care: they study general trends in the provision of the population with doctors and nurses, highlight promising shifts in the composition of personnel, and determine new emphasis in educational policy – the priority training of general practitioners, nurses with expanded functionality (Birch, 2009 : 57; Lafortune 2014). Representatives of another direction focus on the issues of regulating the composition of the future personnel of the health care system. In this case, the specific mechanisms of this regulation and their ability to actually ensure the optimal structure of personnel become the subject of analysis; the practices of individual countries are compared, and the most promising approaches are highlighted (Ono, Schoenstein, Buchan 2014).

Of particular interest to foreign researchers is the issue of labor economics of the healthcare system: the system of personnel selection and training, management of medical organizations, remuneration and motivation of personnel (Blštáková J., 2021; Birch S. 2009; Martinez J., 2002).

In the Russian literature, the issues of personnel and educational policy are usually considered separately from each other. If the planning and regulation of the personnel structure do not fully take into account social needs, then the educational policy is “doomed” to train unclaimed specialists (Sheiman, 2018: 132; Voskanyan, 2022: 96)

A large-scale study in the field of providing countries with medical personnel is published by the Lancet. The research paper entitled “Measuring human resource access to health and its relationship to universal health coverage for 204 countries and territories from 1990 to 2019: a systematic analysis for the Global Burden of Disease Study” covered 204 countries. According to experts, in 2019 the world lacks 43 million medical workers. And this problem is typical for more than 160 countries (primarily poor countries in Asia and Africa) (Lancet, 2021).

Russia occupies a fairly high position on the world stage in this indicator (Lancet, 2021). We

believe that such assessments are premature, given the size of the country and the high socio-economic differentiation of its regions. According to the estimates of the Ministry of Health of the Russian Federation, in 2022, the personnel shortage of medical workers is 84.7 thousand people, of which 26.5 thousand are doctors (we are talking about state institutions) (Ministry of Health of the Russian Federation). This, in turn, makes it difficult to fully transition to a knowledge economy and new technologies. Without ensuring the basic needs of the system in medical personnel, there can be no question of the effectiveness of the use of such technologies.

The assessment of the impact on the healthcare system of various types of innovations was carried out by such Kazakhstani scientists as: Saparaliev D.T., Spankulova L.S., Dzshosibaev S. (Saparaliev D.T., Spankulova L.S., Dzshosibaev S., 2018).

Scientist Bayzhunusov E.A. studied the characteristics and implementation of state health programs in the Republic of Kazakhstan (Bayzhunusov E.A., 2018).

The planning of the need for medical care, the formation of the market for medical services, the activities of medical institutions from the position of medical insurance in the Republic of Kazakhstan were carried out by such scientists as: Tinasilov M.D., Urkumbaeva A.R. (Tinasilov M.D., Urkumbaeva A.R.).

Omirbayeva B.S. in her writings considered the formation of competitive healthcare in the Republic of Kazakhstan based on an effective healthcare model, including the training of highly qualified personnel (Omirbayeva B.S., 2018).

In the Republic of Kazakhstan, issues related to the transition to a knowledge economy, the provision of human resources in the country from the perspective of knowledge flows and diffusion of innovation as a driving force of economic development, using the example of labour migration of researchers, have been addressed by such scientists as: Spankulova L.S., Kerimbaev A.R., Nuraly E., Korgasbekov D.R., Lakhbaeva J.L. (Spankulova L.S., Kerimbaev A.R., Nuraly E., Korgasbekov D.R., Lakhbaeva J.L., 2020)

Kazakh scientists, in particular Sagiyeva R.K., Zhuparova A.S., Zainullina Zh.R. consider the knowledge economy from the perspective of a knowledge-intensive economy, the main consumer of the resources of which is new knowledge (Sagiyeva R.K., Zhuparova A.S., Zainullina Zh.R., 2016).

In their works, Kazakh scientists Uskelenova A.T., Baidakov A.K. consider the factors of

formation of the “knowledge economy” in the prism of economic growth models (Uskelenova A.T., Baidakov A.K., Seytzhano S.S., 2020).

Kazakh scientists such as: Alzhanova F.G., Dnishev F.M. consider in their works human resources and science from the standpoint of a creative economy and knowledge economy (Alzhanova F.G., Dnishev F.M.).

The knowledge economy from the standpoint of the theory and methodology of intellectual property, commercialization, science and education was handled by the Kazakh scientist Ramazanov A.A. (Ramazanov A., 2019).

In general, the currently available literature is mainly focused on the planning and regulation of staffing in the health care system. However, the provision of personnel in the health care system in the context of the transition to the knowledge economy is a complex object of research in different countries. Therefore, the principles of personnel support of the health care system for the development of the knowledge economy remain insufficiently studied.

Despite the high significance of the research results, the following questions were revealed:

- factors influencing the attractiveness of the doctor’s profession in the health care system,
- differentiated payment system for medical workers,
- areas of training of specialists in the healthcare system,
- effective management of the healthcare system,
- shortage of doctors in rural areas,
- issues of professional orientation work for attraction to medical specialties,
- issues of planning budget places in Vuzakh for medical specialties.

We decided to fill this gap in practice and considered these questions in the section “Results and discussions”. In this regard, it is necessary to develop conceptual foundations and propose practical implementation measures in the field of staffing the health care system for the transition to the knowledge economy. Thus, the problem of scientifically based staffing in the health care system in the conditions of the functioning of the knowledge economy will be solved.

Methodology

Statistical materials of the World Health Organization, data of the Ministry of Health of Russia and the Federal State Statistics Service, Decree of the Government of the Republic of Kazakhstan “Quality and affordable healthcare for every citizen “Healthy Nation” dated October 12, 2021 No. 725,

estimates of leading experts in the field of healthcare of the Ministry of Finance of the Russian Federation, National Research University Higher School of Economics and the Center for the Development of Regional Policy, information and analytical materials of Russian and foreign news agencies, expert assessments, as well as data of scientific researches and materials of periodical press are used in this study. The study is based on the analysis of qualitative and quantitative indicators of the development of the healthcare system in the world and in Russia. The method of comparative analysis allowed us to better understand the problems that the Russian health care system faces in the field of staffing and offer a number of recommendations for smoothing them out in the new conditions.

Results and discussions

Problems of personnel in the healthcare system of Russia

Since 2004, Russia has been undergoing a process of reforming the healthcare system. Its essence, first of all, was to eliminate inefficient hospitals. As a result, according to experts, this led to a halving of the number of hospitals, polyclinics – by 12.5% (Healthcare in Russia, 2022: 90). The dynamics of the number of hospital organizations is shown in Figure 1.

The situation is better with outpatient clinics.

The noted negative trend of the period 2004-2008 was turned and the number of outpatient clinics in 2020 exceeded the level of 2004. (Fig. 2).

Since 2004, there has been a process of reducing the number of hospital organizations under the auspices of optimizing the healthcare system and reducing inefficient educational institutions. As a result, according to experts, this led to a halving of the number of hospitals, polyclinics – by 12.5% (Health in Russia, 2022: 90)

The situation is better with outpatient clinics. Their dynamics is shown in Figure 2.

The noted negative trend of the period 2004-2008. was reversed and the number of outpatient organizations in 2020 exceeded the level of 2004. (Fig. 2). This process is associated with the opening of private medical organizations, including beauty parlors.

As for doctors, the situation in the country as a whole has improved significantly over the past six years. It should be noted that the health care reform has indeed had a negative impact on the state of health care personnel. In 2015-2016 there was a minimum for this indicator over the past 11 years (Fig. 3).

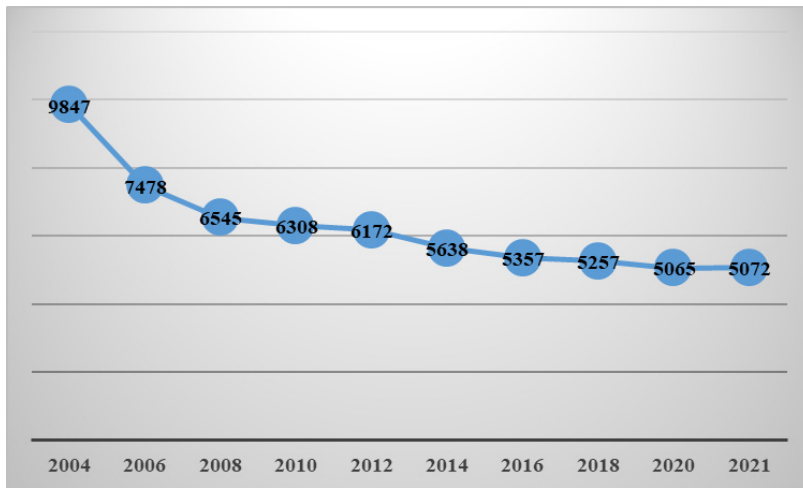


Figure 1 – Number of hospital organizations, in units, 2004-2021
Note: compiled by the author according to official data of the Federal State Statistics Service

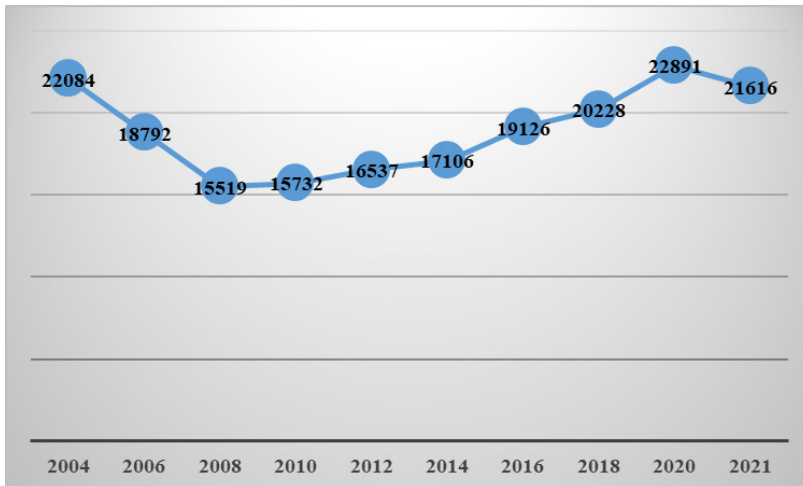


Figure 2 – Number of outpatient organizations, 2004-2021
Note: compiled by the author according to official data of the Federal State Statistics Service

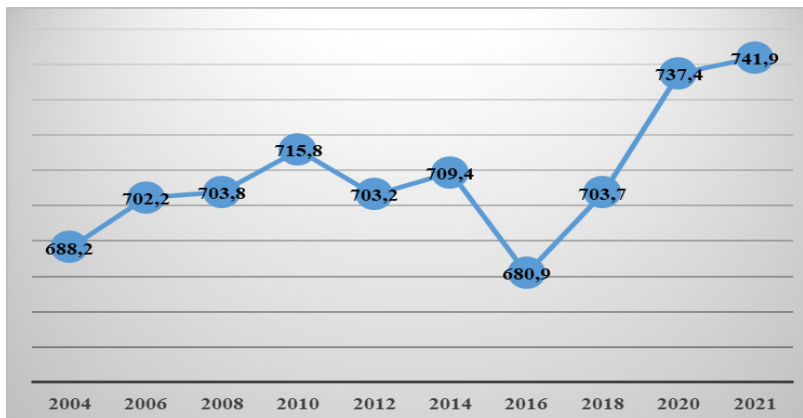


Figure 3 – The number of doctors, in thousands of people.
Note: compiled by the author according to official data of the Federal State Statistics Service

Growth over the past five years has amounted to more than 10% and outperformed 2004 figures. Unfortunately, this did not lead to the elimination of the shortage of doctors in state polyclinics and hospitals. The main growth of doctors was observed in the private sector. The share of employees in private organizations in 2010 was 11.1% (Rosstat, 2023).

Experts note the excess of the number of full-time positions over the number of available sites. This is due to the peculiarities of the personnel planning system. Thus, the staffing table in hospitals is adopted and adjusted annually for the next calendar

year. Therefore, the formation of new plots lags behind population growth. This problem is typical, first of all, for cities where the process of urban planning is actively underway and the “center-periphery” law (pulling resources from the periphery to the center) is in effect (Sheiman, 2022; Friedmann, 1964: 203; Wallerstein, 1976). The opposite trend is observed in the provision of personnel for therapeutic areas – an acute shortage of full-time positions of district therapists. If we can talk about a positive trend with doctors in recent years, then the situation with nurses is completely opposite. The number of paramedical personnel is shown in Figure 4.

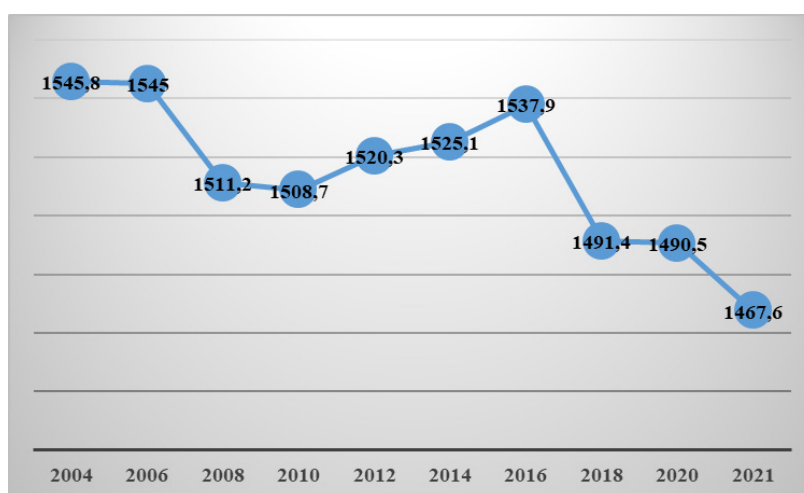


Figure 4 – Number of paramedical personnel, in thousands of people, 2004-2021.

Note: compiled by the author according to official data of the Federal State Statistics Service

If we can talk about a positive trend with doctors in recent years, then the situation with nurses is completely opposite. If since 2010 there has been an increase in the absolute number of medical personnel, then already in 2016-2017, it was replaced by a fall (down 5% in 2012 compared to 2016) (Fig. 4).

On average in the Russian Federation, the provision with doctors working in state and municipal medical organizations in 2021 amounted to 51.0 per 10 thousand people. This is a fairly high figure among European countries and Russia is in the TOP-20 for this indicator (Report on the State of Health in Europe, 2022: 34). For example, in 2018 in Germany, this indicator is about 43 doctors per 10 thousand people (in Russia in 2018 this figure was 47.5) (German Federal Ministry of Health, 2020; Rosstat, 2023).

However, we gave only a general picture of the state of personnel in the Russian healthcare system.

Russia has a vast territory, and it is characterized by extreme heterogeneity in the distribution of labor resources in regions with different levels of socio-economic development.

Among the subjects, the highest provision with doctors is observed in the Chukotka Autonomous District (65.5), the Magadan Region (60.2) and the Republic of Sakha (56.9). These are, as a rule, hard-to-reach, remote territories, so the presence of their own medical personnel is a necessary condition for ensuring the national security of these territories. The city of St. Petersburg also proved itself (58.2). It is noteworthy that Moscow (43.5) took only 14th place, despite the presence of high demand and high incomes of the population compared to other regions of the country (Rosstat, 2023).

The same problem is common in other post-Soviet countries. For example, despite the annual increase in doctors' salaries from 2019, the average

salary of medical workers does not exceed 208,000 tenge per month (Kazinform).

Among the outsider regions there are also subsidized regions with a low standard of living of the population, and quite rich ones: the Chechen Republic (26.8), Sverdlovsk (27) and Kaluga regions (29.8), which are famous for their industry and high standard of living of the population. In other words, the health system staffing in the region is influenced by a whole set of factors, one of which is the availability of financial resources in the region and the high-income population. The shortage of doctors is especially acute in rural areas. The indicator of provision with doctors in rural areas is several times less than in cities: 14.5 physicians per 10,000 rural residents versus 45.2 per 10,000 residents in cities. According to experts, the personnel planning methodology for rural areas should establish convergence of staffing indicators to at least a twofold level (MED Russia, 2021). In other words, we see a very heterogeneous picture across the country. And it depends on many factors: population density, remoteness of the territory, the level of its socio-economic situation, environmental problems, living standards, traditions of the population that lives in the territory.

Working conditions are important. Medical staff face constant work overload: reduced vacation time; increase in working hours; reduction of various additional payments for harmful working conditions of healthcare professionals (Oshkordina, 2016: 106). This negatively affects the motivation of staff and the prestige of the profession as a whole. Thus, according to the All-Russian Union of Insurers, in 2021 the number of complaints against state medical organizations doubled in Russia. Thus, a survey conducted in 47 Russian regions showed that only a quarter of patients are satisfied with the quality of free healthcare (Sokolov, 2020).

Of course, the most important factor that affects the attractiveness of the profession is wages. It is earnings that determine the preferences of physicians in choosing the direction of their activity and the place of application of labor.

The ongoing survey of medical workers showed that the issue of wages is a key one and, according to 76% of respondents, low wages should be considered the main factor in the shortage of personnel in medicine (Voskanyan, 2022: 96).

For example, in developed countries (USA, Western Europe, Australia, Korea), a doctor has the status of a professional elite of society. The state of these countries places high demands on the level of

training and qualifications of a doctor (Chernavsky, 2021: 5-6; Bernal-Delgado, 2018: 24)

In Russia, despite the May 2012 decrees of the President of the Russian Federation on increasing the level of wages in the healthcare system up to 2 times the average level in 2018, it is about 1.1–1.5 times the average level for the region (Sozarukova, 2018: 105).

The average salary of medical workers in 2022 in the country amounted to 92 thousand rubles. Physicians' salaries vary by region and by line of business. Thus, the highest salaries are paid to doctors in resource-rich regions. In the Nenets Autonomous District, for example, the average salary exceeds 200,000 rubles a month, while in North Ossetia, Ingushetia, and Kabardino-Balkaria, average earnings range from 45,000 to 49,000 rubles a month. There is also a significant difference between the various areas of activity of doctors. As a rule, it also depends on their demand (deficit) in different regions (Rosstat, 2023).

Low wages and high labor intensity are the main reason for changing jobs for medical personnel. More and more physicians prefer the private healthcare sector. The ratio of the number of private and public medical organizations is 3.2–4.0 to one, respectively, in favor of private clinics. Therefore, the vast majority of doctors combine work in public and private hospitals. Many healthcare professionals do not plan to work in public hospitals after completing their education (Rugol, 2019: 52).

Speaking about the shortage of doctors, it should be noted that there are both demanded (“popular”) directions and unclaimed ones, where this problem is especially acute. The most popular areas of training are general medicine, dentistry, pediatrics and pharmacy (Healthcare in Russia, 2022: 118). According to the estimates of the Ministry of Health, the situation with the shortage of personnel is different in the regions of Russia, but in general there are not enough ophthalmologists, psychotherapists, traumatologists and a number of other specialists. Ministry specialists note that the reasons for the shortage of personnel are very diverse – changing demographic indicators, technological and social changes, and the professional and qualification structure. The main problem is not a shortage of personnel in the health care system, but personnel imbalances. For example, there is an imbalance of medical specialists and doctors of the district service in the primary care, as well as in the provision of medical personnel in institutions located in rural areas, urban-type settlements and cities (Ministry of Health of the Russian Federation, 2023).

The shortage of staff in 2022 was affected both by a “noticeable decrease” in salaries due to a reduction in incentive payments for the diagnosis and treatment of COVID-19, and labor migration of medical workers from state institutions to commercial clinics. There is also a positive trend: at the end of 2021, the staffing of doctors in clinics where primary medical care is provided increased by 2.6% compared to 2020 and amounted to 82.5%, with paramedical staff – by 1.4%, increased to 85% (Ministry of Health of the Russian Federation, 2023).

For example, the Republic of Kazakhstan also faces such a problem as an imbalance in the provision of personnel between urban and rural healthcare. 83% of doctors live in the city, 17% in rural areas. To increase the number of doctors in the industry, healthcare entities are being disaggregated. Private investors are being attracted.

Measures to prevent a shortage of personnel from the healthcare system in Russia

Health system reform: back in time

Many experts say the 2012 healthcare reform has brought serious problems to the system: the closure of hospitals, the reduction of medical staff, the commercialization of medicine on a huge scale. Experts are increasingly talking about the need to use the Soviet experience. Its essence was to create by the state all the necessary conditions for free services to the population. The emphasis was on disease prevention. WHO representatives recommended that other countries use elements of the Soviet model. For example, Western countries used elements of the Soviet model in the formation of their medical system. It exists, in particular, in the UK, Ireland, Denmark, Italy, Spain (Vedomosti, 2020).

According to experts, the modern healthcare system lacks centralized management. The planning system will help to understand the real needs of the population in the field of healthcare: personnel, medicines, equipment. This will significantly increase the efficiency of spending budget funds. According to HSE Professor V.V. Vlasova, it is free medicine that is the future, which means that it is necessary to have free access to primary medical care (district doctors) (Vedomosti, 2020).

In the Republic of Kazakhstan, elements of corporate governance have been introduced in medical institutions: supervisory boards have been established and a rating of medical organizations is being maintained.

It is also necessary to refer to the experience of other countries. Along with the still prevailing

model of manager-expert (specialist in the field of medicine), in Western Europe, managers who have completed training in health management (MPH, MSc., MHA or others) have become widely invited, and their role in a medical institution is not medical, and managerial. The cadre of managerial personnel in leading medical positions is observed in countries such as the UK, Spain and Germany, where the decentralization of health care has increased the need for managerial skills at the highest levels of the management system. (Blštáková, 2021:6; Kaben, 2006; Chernavsky, 2021:5; Bernal-Delgado, 2018:76).

Wage

The strong differentiation of regions has led to an outflow of doctors to territories with a higher standard of living and wages. According to experts, a differentiated approach to the problem of remuneration of doctors is needed. It is necessary to pay special attention to subsidized regions and rural areas in order to motivate medical workers not to leave them. It is worth noting that a significant form of support has been developed for the village – the Zemsky Doctor / Paramedic program. Its main purpose is to provide personnel for remote regions (the Far East, the Arctic, the Far North), hard-to-reach places and rural areas. It is designed primarily for young professionals, although only people over 50 are eligible for age restrictions. According to the program, doctors and paramedics who meet the requirements receive a lift in the amount of 2 million rubles to 500 thousand rubles and must work for at least 5 years in a certain territory (Government of the Russian Federation). However, the program is not always effectively implemented locally. According to representatives of the All-Russian Popular Front, the program is ineffective. Payments are made on the basis of the subsidiary responsibility of the federation and regions. Unfortunately, the regions do not always have enough funds to implement this program.

It is important not only to offer lifts to young professionals, but to create favorable conditions for life. If these are specialists who come to the village, then the main problem is the provision of housing.

Exchange of experience and academic mobility

The knowledge economy presupposes a well-developed system of interaction with other countries. Exchange of experience, joint developments, collective assistance in solving important problems is a necessary condition for the development of the healthcare sector. Within the framework of the Eurasian Economic Community, solid foundations have been created for the formation of a single

space: economic, cultural, labor and intellectual. The absence of barriers makes it possible to implement academic mobility programs for medical students, as well as to carry out business trips for already working healthcare professionals. Taking into account the geographical proximity of the Republic of Kazakhstan, it is proposed to develop joint educational programs at three levels of education for the training of future doctors, as well as actively use the system of free internships for already working specialists. The base of the internship can be the Universities of the Republic of Kazakhstan and the Russian Federation, included in the QS 300. This will allow to better understand the cultural characteristics of the nearest neighbors, create a solid foundation for the implementation of large joint projects, and also provide an additional influx of labor in Russia and Kazakhstan.

Career guidance

Career guidance for future specialists is of great importance. Less than 20% of general education organizations carry out additional training for graduates who have expressed a desire to enter medical schools. At the same time, many years of experience show that schoolchildren sent to study and returning to their native lands after graduation, most of them stay there for a long time (Mishchenko, 2022: 47).

Effective types of career guidance include a symbiosis of propaganda methods (excursions, meetings with teachers of educational institutions, representatives of various medical professions, publication of reference information, etc.) and various forms of extracurricular activities with the participation of various government agencies. Both educational organizations (universities, colleges) and specialized organizations (medical institutions) and government agencies (territorial health authorities, employment services) can take part in the process.

Various federal and regional programs and projects are of great importance. In the Republic of Kazakhstan there is a Decree of the Government of the Republic of Kazakhstan "Quality and affordable healthcare for every citizen" Healthy Nation "dated October 12, 2021 No. 725 For example, the project "Future Human Resources in Modern Healthcare" in 2019-2022, implemented in various regions of Russia, is designed, in addition to the correct formation of the idea of the profession of a doctor among schoolchildren, to increase the number of targeted training agreements concluded, after which the graduate is obliged to will work within the region

Education

One of the main reasons for the shortage of doctors, according to a number of authors (Sheiman,

2018; Sozarukova, 2018; Rugol, 2019), is the state's lack of regulation of the number and structure of extrabudgetary places when applying for residency. They are determined by the medical universities themselves, which leads to disproportions in the formation of future specialists. Preference is given to popular specialties – dentists, gynecologists, urologists, plastic surgeons, etc. The choice is based not on the lack of specialists in a particular healthcare sector, but on the opportunity to receive extrabudgetary income.

One of the effective methods to reduce the shortage of doctors, especially in rural areas, would be the mandatory distribution of graduates of medical universities who studied on a budgetary basis. Thus, the primary link will be replenished, the problem of a shortage of doctors in rural areas and workers' settlements, as well as in remote regions will be solved (Sozarukova, 2018).

Conclusion

It is impossible to build a knowledge economy without the availability of qualified personnel (the principle of the formation of labor resources for the knowledge economy (Bushueva, 2015: 18). This principle is especially relevant for the healthcare sector, where human life and health depend on the work of doctors. For Russia, the problem of personnel in the healthcare system remains extremely relevant. As the analysis showed, there are significant staffing disproportions both in the regions and in individual medical specialties. This is influenced by a large number of factors, the main of which are low wages and high labor intensity. The process of commercialization of medicine is underway, which means getting quality health care is not available to everyone, which in turn undermines the principle of universal access to health care.

The state is making efforts to eliminate the situation that has arisen. However, so far the programs have not produced the planned results. Experts believe that, along with the use of foreign experience, it is necessary to turn to the Soviet health care system. In terms of wages, a differentiated approach should be used. Raise wages, first of all, in regions where the standard of living is low, so that the region remains attractive to doctors. Particular attention should be paid to the system of planning future personnel on the part of the state, as well as career guidance in schools. This will reduce the staff imbalance and provide the healthcare sector in Russia with much-needed labor resources.

In the Republic of Kazakhstan, the greatest deficit is noted in such specialties as: anesthesiology-resuscitation, psychiatry, general medical practice, obstetrics and gynecology, pediatrics. It is of interest to solve the problem of shortage of doctors in the Republic of Kazakhstan. In order to overcome the shortage of doctors, three-year training in state healthcare organizations is mandatory, state educational grants are allocated at the expense of the republican and local budgets. In the Republic of Kazakhstan, disease management programs are being implemented in three areas: arterial hypertension, chronic heart failure, and diabetes mellitus. These programs make it possible to form joint and several responsibility of people for their health and manage the disease.

This study has its limitations. It carried out a quantitative analysis of statistical data on the example of one country – the Russian Federation.

In further studies, it is worth conducting a factor analysis and identifying the strength of the influence of individual factors on the staffing of the health care system. It is also necessary to study the experience of other countries in motivating medical workers and develop recommendations for introducing this system into the Russian system. Particular attention should be paid to supporting nurses and young professionals, as well as creating effective incentives to work in rural and remote areas.

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