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THE MODERN ASPECTS OF NETWORK FORM OF IMPLEMENTATION OF EDUCATIONAL PROGRAMS IN HEALTH CARE

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The network form of implementation of educational programs in health care or network form of education, is an innovative approach to educational process that is actively applied in medical and adjacent universities to improve quality of future specialists training. This approach implies cooperation of various educational and scientific institutions, such as universities, research institutes, medical organizations, as well as application of electronic resources and remote technologies. The article considers legislative regulation of implementation of online form of educational programs and application of online form of education in the field of health care in the Russian Federation. The results of study carried out in scientific and educational laboratory of Educational Development of the Siberian State Medical University that allows to evaluate implementation of individual educational programs in medical schools in Russia are considered. The Russian projects of online forms of interaction in health care that significantly contribute into development of health care are considered in terms of training professional personnel.

Key words: network; online; education; program; health care; cooperation; application practice.

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Introduction

With the development of medical technologies and the discovery of new scientific knowledge, healthcare education needs to adapt to modern challenges. One of the key trends is the transition to a network form of educational programs. This approach optimizes the training of medical professionals by improving access to resources and specialized knowledge.

The object of the research of this scientific work is the network form of the implementation of educational programs in the Russian Federation in the field of healthcare.

The purpose of this work is to analyze the regulatory framework governing the use of the online form of educational programs in the Russian Federation, as well as to consider the practice of using this form in the field of healthcare.

Within the framework of the stated topic, the Federal Law "On Education in the Russian Federation" No. 273-FZ dated 12/29/2012 was studied. Emphasis was placed on the study of Article 15. Article 15 of the Federal Law "On Education in the Russian Federation" No. 273-FZ dated December 29, 2012 creates a regulatory framework for the implementation of the online form of educational programs. Its provisions are aimed at ensuring

the quality of education and creating conditions for inter-organizational cooperation. Thus, article 15 is a key tool for modernizing and increasing the flexibility of the educational process, which is especially important in the context of rapid technological development and changing labor market requirements.

Materials and methods

In the course of the study, the authors examined the legislative framework governing the issues of the network form of educational programs in the Russian Federation. The works of Russian authors who conducted research within the framework of the stated topic and the research of employees of the scientific and educational Laboratory for the Development of Education of the Siberian State Medical University were also studied. Such methods of scientific cognition as empirical, structural and expert assessments were used in the work.

Results

The issues of the network form of the implementation of educational programs are regulated by Chapter 2, Article 15 of the Federal Law "On Education in the Russian Federation" No. 273-FZ [1]. According to this article, the network form of educational programs imple-

mentation is a modern approach to the organization of training, which allows students to master educational programs and their components using the resources of several educational and other organizations. It is worth saying that this approach has a number of key advantages and opportunities:

First, access to a variety of resources. Students get access to unique educational materials and teaching aids that various educational institutions may have.

Secondly, partnerships with foreign institutions. The inclusion of international resources and methods in the educational process helps to broaden the horizons of students and increase competitiveness in the global labor market.

Thirdly, an interdisciplinary approach. The online form allows you to include resources from various industries in the educational process, such as science, medicine, culture, sports, etc.

Fourth, the flexibility of the educational process: The use of a network form allows you to develop individual educational trajectories adapted to the interests and capabilities of each student.

Fifth, the practical orientation. Thanks to cooperation with organizations in various fields of activity (for example, scientific, medical and sports), students get the opportunity to put theoretical knowledge and skills into practice, which significantly improves the quality of education.

Examples of the implementation of a network form of educational programs may include:

1. Joint educational programs.
2. International exchanges and internships. Networking allows you to organize exchange programs with foreign universities, where students have the opportunity to study abroad for a semester or a year.
3. Online courses and webinars. Using the resources provided by various educational platforms allows students to gain knowledge from leading experts from around the world without the need for physical presence.
4. Joint research projects. Scientific organizations can offer platforms and mentors for students interested in conducting research. It also promotes the integration of science and education.

Thus, the network form of educational programs implementation opens up wide opportunities to improve the quality of education, its accessibility and compliance with modern requirements and challenges. It contributes to the integration and enrichment of the educational process, providing deeper immersion of students in the studied disciplines and preparation for professional activity in a global context.

It is worth emphasizing that the use of a network form of educational programs requires a formal approach and a structured agreement between all parties involved. Such an agreement plays a key role in ensuring effective and high-quality education. Let's list the main aspects of the standard contract of the network form of the implementation of educational programs:

1. Characteristics of the educational program:
 - type of program (determines whether the program is basic (for example, bachelor's degree, master's degree) or additional (for example, advanced training courses);
 - the level of education (may be primary, secondary vocational, higher, postgraduate, etc.);
 - the orientation of the program (determines the scope of the educational program, for example: engineering sciences, medicine, art).
 2. Academic subjects, courses, disciplines (modules):
 - specific components of the educational program that are implemented in a network form;
 - characteristics of these components, including content aspects and requirements for mastering.
 3. Documents on education and qualifications:
 - issued documents (indicate the final document issued at the end of the program (diploma, certificate, certificate).
 4. Resources used:
 - the amount of resources (infrastructure, personnel, material) is provided by each of the organizations.
 5. Distribution of responsibilities. A clear definition of the responsibilities of each of the participating organizations within the framework of the program, which cover the coordination of the educational process, conducting lectures and practical classes, organizing and conducting exams and tests, as well as advising students.
 6. The term of the agreement. The start and end dates of the cooperation are taken into account, as well as the possibility of extending the contract if necessary.
- According to the legislation of the Russian Federation, the use of property of state and municipal organizations in the online form of educational programs is carried out free of charge, unless otherwise stipulated by the contract. This norm is regulated by Federal Law No. 273-FZ in order to ensure the accessibility and quality of education, as well as the effective use of resources of educational organizations [1].
- The online form of implementation of educational programs provided for by the Federal Law "On Education in the Russian Federation" No. 273-FZ is actively used in various fields, including healthcare.
- The main aspects of the network form of implementation of educational programs in the field of healthcare:
1. Partner organizations. The network form can be implemented not only by educational institutions, but also by scientific organizations, research centers, clinics, hospitals and other healthcare institutions. This allows students and doctors to study in conditions as close as possible to real professional activity.
 2. Resources and infrastructure. Each of the partner institutions can provide its own unique resources within the framework of the network form:
 - laboratories and research centers for scientific research and practical training;
 - clinical bases for internships and internships;
 - educational materials, databases, access to specialized literature and software.

3. The teaching staff. The training can be conducted by teachers and researchers working in partner organizations. This ensures the high qualification of the teaching staff and the opportunity to involve leading healthcare professionals in the educational process.

4. Flexibility of the educational program. The online form allows for a more flexible approach to the creation and implementation of educational programs. The program may include courses and modules offered by various partners, which expands the range of competencies and knowledge available to students.

Therefore, it is possible to formulate the advantages of a network form of implementation of educational programs in healthcare:

Firstly, it is the quality of education, since the joint use of resources and experience of various organizations allows us to improve the quality of educational programs and make them more relevant and in demand.

Secondly, the practical orientation associated with the ability to apply theoretical knowledge in practice in the real working conditions of medical institutions.

Thirdly, access to advanced medical technologies and innovative methods of diagnosis and treatment.

Fourthly, it is impossible not to note the interdisciplinary approach, within which the integration of various fields of knowledge is carried out, which is especially important for a comprehensive understanding of modern medical problems.

Discussion

Specialists of the Institute of Economics of the Russian Academy of Sciences point to a significant transformation in both economic systems and educational structures, which is directly related to the transition to a post-industrial structure and network forms of interaction [2, 3].

N. V. Smorodinskaya notes that, “adapting to a new paradigm, economic systems modify not only the previous growth model, but they also have their own traditional organizational code — they are moving to a cluster structure and horizontal network connections” [3].

According to many authors, the network activity of educational organizations is becoming the most important catalyst for their innovative development in modern conditions. They get the opportunity not only to improve the quality of the educational process, but also to effectively use resources and optimize labor costs [4, 5].

According to the author, E. V. Pomazanova: “The students of today are the practical figures of tomorrow, these are the cadres who will take over our baton and, perhaps, reach new horizons of knowledge and transformation of life. And only close cooperation between the educational institution and practical bases will contribute to the final result of our activities — the awarding of a diploma to a specialist who is expected in practical healthcare” [6].

The results of a study conducted by the staff of the Scientific and Educational Laboratory of Educational Development of the Siberian State Medical University, published on the official website of the *Vademecum* journal, are interesting for consideration. The purpose

of the study was to identify the key ways of presenting individual educational programs in medical schools in Russia [7].

According to the authors, individual educational programs (hereinafter referred to as IOP) in Russian medical universities allow flexible and effective adaptation of the learning process to the individual needs and career ambitions of students. Through a combination of theoretical training, practical skills, scientific research and international experience, IOP contributes to the comprehensive development of the competencies of future medical specialists, which ultimately improves the quality of medical education and healthcare in general. IOP in combination with the online form of educational programs create a powerful tool for providing high-quality and personalized education in medicine. Therefore, as part of a network form of interaction, this type of program is of considerable interest for consideration.

The results of the analysis of specialists who examined the websites of 46 specialized universities subordinate to the Ministry of Health of the Russian Federation indicate the presence of significant gaps in the presentation of information about individual learning trajectories. According to the research, only 30% of educational organizations' Internet portals contain relevant information. Also, experts have revealed that about 60% of universities implement the individualization of educational trajectories through the choice of electives, courses of additional professional education (DPE) and advanced training (PC). 52% of universities implement the individualization of educational trajectories through the level division of the content of disciplines [7].

Let's consider the practice of implementing a network form of educational programs, which has many examples. These include all-Russian projects, and joint educational projects of large medical universities and research institutes, including distance courses, webinars, scientific conferences and other forms of interaction, and international cooperation with double degree programs, and joint educational projects with foreign universities and medical institutions, and clinical internships where students can participate in real medical practice and gain experience from recognized specialists.

It is worth noting new Russian projects in the field of network forms of interaction in the field of healthcare, which deserve attention and are a significant contribution to the development of the healthcare sector in terms of training professional personnel. Here are some of the most notable and promising projects at the moment:

In June 2022, the Moscow Institute of Physics and Technology (MIPT) opened enrollment for a new master's program called “Applied Data Analysis in the medical field” [8]. This program is designed for professionals in the fields of medicine, biology and scientific research who are interested in applying data analysis techniques in their professional fields. The program differs from similar courses offered by other universities in its fully distance learning format. The program was developed in close cooperation with the IT school SkillFactory,

which has significant experience in the field of online education and training of specialists in the IT field. The pharmaceutical company “Biocad” acted as one of the industrial partners of the program.

In February 2023, Sirius University of Science and Technology, located in the Krasnodar Territory, launched recruitment for two new master's degree programs: “Molecular Medicine” and “Neurobiology” [9]. Individual study paths in the following specialties are provided for undergraduates:

- translational neuroscience (a field related to the transformation of basic neuroscience research into clinical applications that can improve the treatment of neurodegenerative diseases and other disorders of the nervous system);
- cognitive neuroscience (focus on the study of neural mechanisms responsible for cognitive functions such as memory, attention, perception and decision-making);
- bioneuromechanics (combined study of biological and mechanical aspects of neurosystems, which can be used in robotics and prosthetics, as well as in physiotherapy).

In addition, in July 2024, a new educational program was launched, developed jointly by the I. M. Sechenov First Moscow State Medical University, the South Kazakhstan Medical Academy and the Russian Biotechnological University [10]. This online master's program is called “Pharmaceutical Ecology and a Safe Urban Environment” and includes three specialized tracks that students can choose depending on their interests and career plans:

- pharmaceutical ecology (a field focused on the study of the effects of pharmaceutical substances on the environment and the development of strategies for their safe use and disposal);
- agrobiotechnology (focus on the application of biotechnologies in agriculture to improve pest resistance, increase yields and ensure the environmental safety of food);
- urban ecology and ecotoxicology (the study of environmental and toxicological challenges associated with the urban environment and the development of solutions to minimize the harmful effects of urban infrastructure on human health and ecosystems).

All these projects demonstrate how the network form of interaction contributes not only to educational programs, but also to the overall development of the medical field. They ensure closer cooperation between different institutions, improving access to knowledge and technology, which ultimately leads to an improvement in the quality of life and health of the population.

Conclusion

Thus, the Federal Law “On Education in the Russian Federation” No. 273-FZ not only allows, but also supports the network form of educational programs, which is especially useful for the healthcare sector. Network programs contribute to improving the quality of training of medical specialists, making their training more complete, relevant and tied to real practice.

It is worth noting that the network form of implementation of educational programs in the field of healthcare is an effective tool for improving the quality of medical personnel training. It allows you to maximize the use of resources and experience of various organizations, which leads to the creation of more diverse, relevant and practice-oriented educational programs. This is especially important in the context of the rapid development of medical science and technology, when adaptation to new requirements and challenges becomes a key factor in successful professional activity.

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