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5.8.7. «Методология и технология профессионального образования»

РЕАЛИЗАЦИЯ ПРАКТИКО-ОРИЕНТИРОВАННОЙ МОДЕЛИ ОБРАЗОВАНИЯ В АСТРАХАНСКОМ ГОСУДАРСТВЕННОМ МЕДИЦИНСКОМ УНИВЕРСИТЕТЕ

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Аннотация. Практико-ориентированная модель образования рассматривается в статье как один из вариантов гибких образовательных систем эффективных в условиях быстро растущих темпов модернизации большинства отраслей экономики. Авторы обобщают и критически анализируют опыт реализации обозначенной модели образования в ФГБОУ ВО Астраханский ГМУ Минздрава России, последовательно рассматривая все структурные элементы ее составляющие. В работе исследуется и обосновывается результативность пересмотра в практико-ориентированном ключе традиционного подхода к обучению. Затрагиваются вопросы тех изменений, которые претерпевает образовательная среда университета в новой модели образования, и перспективы развития данной модели.

Ключевые слова: практико-ориентированное образование, симуляционное обучение, компетенция, высшее медицинское образование

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Original article

IMPLEMENTATION OF PRACTICE-ORIENTED EDUCATION MODEL AT ASTRAKHAN STATE MEDICAL UNIVERSITY

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Abstract. The practice-oriented model of education is considered in the article as one of the options for flexible educational systems focused on the rapidly growing pace of modernization of most sectors of the economy. The authors summarize and critically analyze the experience of implementing the practice-oriented model of education at Federal State Budgetary

Educational Institution of Higher Education Astrakhan state medical university of the Ministry of Health of the Russian Federation, consistently considering all the structural elements of practice-oriented education. The article examines and substantiates the effectiveness of revising the traditional approach to education in a practice-oriented way. The issues of those changes that the educational environment of the university undergoes in the practice-oriented model of education and the prospects for the development of this model are touched upon.

Keywords: practice-oriented education, simulation training, competencies, higher medical education

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Global development trends in the modern world create conditions in which universities inevitably face problems of competitiveness. Graduate employment rates in the current economic realities are constantly declining, the competencies developed by universities do not meet the needs of employers, and universities are “late” in training specialists for the changing economic landscape. In these circumstances, the main strategic goal of universities is to form flexible educational systems oriented towards the rapidly growing pace of modernization of most sectors of the economy.

Unlike traditional education focused on the acquisition of knowledge, practice-oriented education is aimed at acquiring, in addition to knowledge, skills, abilities and practical experience. The introduction of the variable "experience of activity" into the educational model simultaneously solves two fundamental problems of training: it strengthens the acquired knowledge through the connection with the future profession of the student and additionally motivates him to study. In such a system, theoretical knowledge is mastered not separately and in advance, but in parallel with practical knowledge, in application to future professional competencies. The practice of training a specialist is implemented on the basis of mastering specific professional actions (diagnostics, treatment, prevention, rehabilitation) and conceptual knowledge and skills (professional thinking, communication methods, manual clinical skills). At the same time, conceptual knowledge becomes the provision, condition and guarantee of the accurate performance of practical actions. [1]

In the practice-oriented model of education, not only the approach to training is revised, but also the content of all elements of educational programs changes. Regardless of the profile of the disciplines, they must use professionally oriented teaching technologies and methods for modeling fragments of future professional activity. Approaches to the organization of educational, industrial and pre-graduation practices are also changing: the professional experience of students is formed as a result of their immersion in a professional environment.

Currently, in accordance with the principles of the practice-oriented model of education, a single complex of professionally oriented disciplines has been formed at Astrakhan State Medical University. The curriculum is built as a "tree of possibilities", within which students form individual educational trajectories. 1st and 2nd years are aimed at training in fundamental disciplines with a large volume of theoretical knowledge, compulsory special general disciplines prevail in 3rd and 4th years, and highly specialized disciplines, the study of which makes it possible to decide on the choice of specialized residency, prevail in 5th and 6th years. All courses have an extended variable part aimed at forming flexible competencies. [2]

In the practice-oriented model, the curriculum is more responsive to changes caused by changing conditions of the labor market and demands of the economy, and (or) demands of the healthcare system. Due to the special epidemiological situation in the region, the curricula of Astrakhan State Medical University are reinforced with courses on "Phthisiology", "Infectious Diseases", "Tropical Diseases", "Medicinal and Poisonous Plants of Astrakhan Region", etc. In addition, the block of optional disciplines is constantly revised, it allows responding to the current needs of the healthcare system not only when forming a new educational program, but also during the current academic year. For example, the curricula of Astrakhan State Medical University contain the following optional disciplines: "Fundamentals of Ultrasound Diagnostics" and "Laboratory Screening", "Organization of Medical Care for New Coronavirus Infection", "Medical Information Systems" and "Artificial Intelligence Systems".

Traditional teaching technologies have been strengthened from the standpoint of a practice-oriented approach: testing of practical skills during midterm assessment; demonstration and supervision of patients; olympiads in clinical and fundamental disciplines, in practical skills. In the final years, training and practical training take place at the clinical bases of the university, including 19 leading healthcare organizations in Astrakhan and the Astrakhan region.

The best achievements of student training "at the patient's bedside", "at the patient's chair" under the guidance of a practicing specialist are preserved. At the same time, the experience and professional competencies of the teaching staff become key in the implementation of practice-oriented training. The teaching staff of the university includes 14 chief freelance specialists of the Ministry of Health of the Astrakhan Region, most of the university employees provide specialized medical care at the clinical bases of the departments; introduce modern methods of prevention, diagnosis and treatment into healthcare practice, including those developed at the university. [3]

The university has created its own unique system of simulation training. New educational technologies (elements of gamification and mnemonics, cases, "standardized patient") and training tools (interactive panels, the Pirogov anatomical complex, plastinates, etc.) are being introduced into the educational process. At Astrakhan State Medical University, all professionally oriented disciplines include elements of simulation training. Students who have mastered practical skills using phantoms, mannequins, and simulators move on to real interventions much faster and more confidently, and their subsequent real results become more professional. [4]

Simulation training is implemented at the Federal Accreditation Center. The center is equipped with multifunctional robot simulators and virtual simulators for examining various systems and functions of the body, allowing for training in endoscopic interventions and interventions under ultrasound control. The Federal Accreditation Center solves a number of important tasks in the educational process of the university: the possibility of realistic training of students without risks for patients; the possibility of objective assessment of students' practical skills; training

in teamwork and stress reduction before extreme situations with emergency care; increasing the level of students' motivation for the learning process.

The method of immersion in practical activities allows students to improve their professional competencies and monitor innovative technologies and treatment methods in the process of mastering higher education. In response to the needs of practical healthcare, in 2023, the university organized an independent "Simulation Clinic". Training in the "Simulation Clinic" is carried out with the maximum approximation of the process of mastering professional competencies to real clinical practice, building individual educational tracks and training in multidisciplinary teams. A special feature of the "Simulation Clinic" is the presence of original designs of clinical blocks, including "working rooms" of a therapist, pediatrician, gynecologist, an operating room, a delivery room, a robotic surgery block and a tactical medicine block. The "Simulation Clinic" is the foundation of continuous medical education at the university. The realism of the learning environment and the ability to repeat actions multiple times on high-tech simulators and interactive training devices contribute to the development of clinical thinking and allow both first-year students to master practical skills and practicing physicians to hone their professional skills.

One of the structural elements of the practice-oriented model is the transformation of the system of organizing students' practices. Monitoring the employment of graduates shows that when selecting specialists, employers are interested in personnel who already have, in addition to specialized education, work experience. Therefore, today young specialists experience difficulties in the labor market competition and in adapting to the conditions of activity. The main problem of low professional competence of graduates and their lack of competitiveness is the lack of practice in solving problems in the field of future professional activity. In this situation, changing the system of industrial practice taking into account the practice-oriented approach becomes an effective solution. Passing industrial practice in conditions close to the conditions of further employment or at the place of future

employment shortens the adaptation period of a young specialist, and also forms in advance the skills and abilities necessary for further work. [5]

The reorganization of practical training should also be oriented towards the needs of regional healthcare and the labor market. Determination of the places of practical training depends on the opportunities for mastering professionally significant competencies and how close the practical training conditions are to the conditions of subsequent employment. At the university, practical training is provided already in the 1st year of study; after the 3rd year, students can be admitted to medical activities in the positions of specialists with secondary medical education (nurse/brother) after passing the exam. Considering the urgent need of regional healthcare for primary care physicians in rural areas and district hospitals, the Astrakhan State Medical University distributes students for practical training accordingly, especially those who have received contracts for targeted training from the Ministry of Health of the Astrakhan Region. The priority is the training of a universal specialist for rural and central district hospitals. And, consequently, the number of students undergoing practical training in regional medical institutions is increasing.

An important aspect of improving the system of practices is the development of practical training for foreign students of the university. Countries ordering training, as a rule, impose the highest requirements for the practical training of students. Foreign students are completely immersed in the profession from the first months of training. They undergo practical training in the best medical and dental hospitals and pharmacies of the city of Astrakhan and the Astrakhan region, as well as at the Federal Accreditation Center. Students have the opportunity to receive an education with full immersion in clinical medical practice. Theoretical knowledge is consolidated by practical experience, regular work in modern clinics with which the university cooperates. For example, the university departments of Cardiology and Cardiovascular Surgery work on the basis of the Federal Center for Cardiovascular Surgery, which is one of the best in Europe. Training at the center provides excellent

experience and skills in treating adults and children, introduces current experience in performing operations on a stopped heart and other modern techniques. [5,6]

When implementing a practice-oriented model of training, not only the classical system of training undergoes changes, but also the entire educational environment of the university. The development of professional competencies is carried out beyond the scope of courses and practices and fills the extracurricular activities of students, contributing to the students' understanding of the essence and social significance of their future profession, and the manifestation of a sustainable interest in it. [7] To develop professional competencies, the university has 11 student teams, uniting more than 1,300 students, including: "Sugar Patrol" (diabetes prevention), "Healthy Start" (healthy eating promotion), "Blood Type" (blood donation promotion), "NAS" (drug, alcohol and smoking prevention), "StudBrain" (training mentor), "Auxilium" (first aid in extreme conditions), "Risk", "Phoenix" and others. More than 500 students are members of the All-Russian organization "Volunteer Doctors".

At present, all the main elements of the practice-oriented education model are functioning at Astrakhan State Medical University. The effectiveness of this model is primarily confirmed by the professional demand for university students not only in employment, but also in the learning process. During the coronavirus pandemic, about 1,200 employees and students were involved in the work by organizing and participating in the work of infectious disease hospitals, creating and operating the Center for Remote Outpatient Monitoring of Infectious Patients. More than 70% of university graduates, including foreign citizens, are employed.

The immediate development prospect should be the personalization of the learning process, aimed at developing professional competencies within the framework of individual educational tracks in continuous medical education, continuity of the formation of professionally significant competencies in the development of a specialty, residency and additional professional education. Practical professional skills formed in the process of obtaining higher education must be maintained and improved during professional retraining and advanced training.

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