MODERN EDUCATIONAL TECHNOLOGIES IN POSTGRADUATE TRAINING OF DOCTORS - CLINICAL PHARMACOLOGISTS

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Abstract. This article presents modern tendencies of the development of continuous medical postgraduate education of doctors - clinical pharmacologists aimed at increasing the quality of specialist training. The significance of modern educational technologies in postgraduate training is discovered on the basis of the experience of the clinical pharmacology teaching. They are such as: distant learning, modular type of learning, multidisciplinary approach, problem learning, modeling of clinical situations,evidence-based Medici.

Keywords: clinical pharmacology, postgraduate training, modern educational technologies.

One of the most important stages in the formation of a doctor-specialist is postgraduate education. In The Krasnoyarsk Territory namely postgraduate education gives the future doctors - clinical pharmacologists the opportunity to acquire necessary qualifications, master social and professional competences in the main sections of clinical pharmacology and learn the principles of rational pharmacotherapy needed for their professional activity [1,2].

Postgraduate training of doctors in the speciality of clinical pharmacology began in the Krasnoyarsk Territory simultaneously with the introduction of the speciality a “doctor - pharmacologist” in 1997 in our country. However, to date the problem of stuffing in the hospitals of the Krasnoyarsk Territory on the speciality of a doctor - clinical pharmacologist has not been resolved. The situation, prevailing in the region, involves deep transformations in the field of training the specialists in clinical pharmacology in our University [3,4].

One of the features of the modern pedagogical process in postgraduate education of doctors is a wide use of modern information technologies. The usage of high technologies in

education created a special branch of telemedicine that is distant training. Distant training is very actual for implementation of postgraduate education of doctors - clinical pharmacologists.

The purpose of this article is to study the role of modern innovative technologies in the postgraduate training of clinical doctors - pharmacologists and to define the goals and tasks of the usage of the modern educational technologies.

Materials and methods. To achieve the goal, stated in the article, we studied the problem of the usage of the modern innovative technologies in postgraduate training of doctors in general. We analyzed the possibilities of the using of the suggested technologies in postgraduate training of doctors in the speciality “clinical pharmacology“.

Considering that postgraduate education needs modern educational methods [5], one of the ways to solve the shortage of clinical pharmacologists in the region is the introduction the innovative educational technologies in postgraduate education of doctors - clinical pharmacologists including the continuous medical education (CME), which will allow to increase the possibilities of training specialists for practical health care in clinical pharmacology.

According to experts, the most promising for changing the learning strategies in postgraduate education are: modular type of learning, multidisciplinary approach, problem learning, evidence-based medicine. Particular attention is paid to distant training of doctors [6, 7].

Russia’s entry into the European educational space made changes in the postgraduate education of doctors. Replaced since 2021 certification for the accreditation of specialists will contribute significant changes in the training of doctors. All physicians must gain 250 educational credits five years before the accreditation. 144 credits of these are credits in the full-time thematic cycle. Doctors gain the rest 106 credits by independent work, namely by visiting conferences, conducting research, attending educational sites CME, remote conferences, webinars, passing short-term remote cycles.

One of the most important tasks at present is the compliance of methodology in postgraduate education with the needs of the health care system. One of the effective mechanisms for solving this problem is the introduction of modular training [7,8] that takes place in our department. It got its name from the word “module” (from the Latin modulus - measure). Modular training is the training of specialists in the relevant discipline consisting of separate complete fragments (modules), that are demanded most in the practical work. The number of such modules is defined by a doctor himself or herself within the framework of the ongoing cycle.

Multidisciplinary strategy while studying the subject “Clinical pharmacology “ consists in that the aspects of pharmatherapy are united according to pharmacological or

pharmacotherapeutic topics. Specific issues of pharmacotherapy, clinical cases or other professional situations in medical practice are considered simultaneously from the position of related disciplines, allowing students to reproduce the most complete picture of what is happening [1, 9].

Problem-based learning implies such an organization of the educational process in which a teacher does not deliver knowledge in a finished form but leaves the problematic tasks for the doctors, prompting them to look for the ways of solving them, that is the problem itself paves the way for the knew knowledge and methods of action. The doctors, together with the teacher, choose diagnostic and therapeutic tactics in a specific clinical situation. They learn not only to solve it but also to predict the result, deeply understanding the nature and mechanisms of the ongoing process. The modern strategy of medical postgraduate education lies in the concept from the knowledge of what to do to move to the knowledge and skills on how to do, from passive learning to active, from simple transfer of information to learning, from teaching independent disciplines to move to their integration around practical problems, from individual learning to multi-professional, from the educational system focused on a teacher's interest to the system focused on the interests of the trained professionals.

In addition, a systematic focus on modern educational technologies is implemented by reflecting innovations in the principles of teaching in the programs; modularity of training - till "the result; variability of training periods should depend on the initial level of students's readiness; forms and methods of teaching should include active methods of distant learning, telemedicine, differentiated learning; methods of control and educational management should include distributed control by modules, testing and ratings, adjustment of individual programs based on the results of control; the teaching aids should include computer programs, integrated and personal databases, simulators[10].

Recently, special importance has been attributed everywhere to distant education of doctors [6,11]. The peculiarity of the modern pedagogical process in postgraduate education is the widespread use of various information technologies. The internet is an integral part of the professional education of doctors. Network technologies make it possible to conduct effectively distance learning (DL) for doctors.

DL is especially important for young specialists, it is impossible without information and communication technologies [10]. DL has been successfully used for several years at the department of pharmacology in pharmaceutical consulting and postgraduate education of doctors - pharmacologists.

DL allows to organize the educational process without interrupting the main work of postgraduate students. The DL system involves conducting distance lectures either within the

framework of thematic courses or practical classes in current areas of medicine on various methods of diagnosing the treatment of various nosological units and individual telemedicine consultations. In addition, DL allows you to effectively control the educational process, accumulate credits, summarize them and take them into account in the future accreditation of specialists, confirming their professional competence [10]. Currently, there are the following types of telemedicine training systems: real-time teleconferences, telelectures and tele-seminars, master classes, thematic and elective courses with monitoring systems, electronic textbooks [13]. Telemedicine is used also for the real training of postgraduate students.

The main goal of distant learning in clinical pharmacology at our department is to orient the doctors in the matters of the discipline studied, to create motivation to study the topic, to determine the connection with other topics of the course sections. The tasks of DL are to provide postgraduate students with remote access to the databases of a source of medical information. Conducting tele-lectures and tele-seminars, conducting remote exams and qualified testing in real time.

A mandatory stage of DL is to control the knowledge of doctors -pharmacologists through testing and solving situational tasks. At the end of the cycle, a three-stage examination is carried out.

Conclusion. Summing up the above, we can say that modern educational technologies are promising methods of postgraduate education that optimize the training of specialists in clinical pharmacology. Training with CME corresponds to the goals and objectives of the modern system of health care in carrying out pharmacotherapy and to the needs of physicians - clinical pharmacologists in accordance with the professional standard of “Physician - clinical pharmacologist”.

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