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INNOVATIONS IN THE SYSTEM OF MEDICAL POSTGRADUATE EDUCATION

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Abstract. *Modernity requires a set of completely new qualities, skills, abilities, and personal features from preparation of doctors at the postgraduate stage of their education. An important role in solving these tasks is played by methods and forms of organization of the educational process, aimed at optimizing the development of clinical thinking. To improve the quality of postgraduate education, it is necessary to widely use innovative methods of the educational process. The article discusses some methods of interactive teaching (interactive lecture, algorithmization of the treatment process, educational discussions, the method of project work, the use of the case method) and substantiates their need for application and high efficiency in the formation of clinical thinking, motivation for in-depth study of the subject, as well as accumulation and analysis of clinical experience. This study shows the effectiveness of innovative teaching methods in the postgraduate doctoral education phase.*

Key words: *innovative teaching, postgraduate medical education*

Over the last decade, a significant modernization of medical education has taken place, and new approaches in the preparation of medical students and their further improvement during the internship period have been formed. Medical education is constantly evolving, gradually but substantially moving from traditional methods (such as textbooks, lectures) to more complex approaches that use modern information and communication technology tools (e.g., e-learning, interactive algorithms, computer modeling, virtual patients) [10]. Such approaches have shown to enhance and improve the leaning skills of medical students, interns, medical cadets during the postgraduate stages, compared to traditional methods.

The main focus of postgraduate education, especially at the stage of specialization (internship), is to find innovative forms and methods of training aimed at improving the quality of specialist training and their self-improvement [7]. These are, first and foremost, new forms, methods and means of learning that encourage active mental and practical activity in the process of mastering the learning material [2]. The use of such a system of methods is primarily aimed not at learning the already known from a teacher, its memorization and reproduction, but on independent mastering of knowledge and skills in the process of active mental and practical activity. It is important to master social communication skills, to be able to defend one's point of view, to take responsibility, to be tolerant, to have communicative competencies, to speak one or two foreign languages [3].

The purpose of this work was to: analyze the effectiveness and appropriateness of the use of interactive methods and forms of training within the educational process at the stage of postgraduate education of interns and dentists.

Materials and methods of research.

Scientific-pedagogical sources and the results of own observations have been studied, summarized and processed by using methods of literary synthesis, structural and logical analysis, based on the principles of systemic approach and systemic analysis.

Results and their Discussion.

Specificity of education of the third millennium involves the use of various modern technologies. Along with the vast introduction of technology into the process of education, the process of its humanization becomes inevitable. The purpose of innovative approach to postgraduate education is to reach a qualitative change in the personality of a dentist or intern physician compared to the traditional system. This is made possible by the introduction into the educational process of didactic programs, forms and approaches aimed at developing the ability to motivate actions, to navigate independently in the information space, and to form creative and non-template thinking [2, 5].

In the traditional organization of the educational process, a one-way form of communication is used as a mean of transferring and generating knowledge. The main source of information, in this case, is the teacher with his level of knowledge, experience and intelligence. One-way communication is characteristic of lectures, and it also can take place during seminars. Traditional presentation of the lecture material should be combined with the involvement of interns and cadets into active discussion. Listeners are given the opportunity to express their opinions, or information they have used from other sources, and to ask questions. The lecture becomes an active element of educational process that includes feedback from the listeners. All lectures are presented in a multimedia version, which offers the opportunity fro them to be sufficiently illustrated. And some lectures are made in the form of video films. In this case, the teacher reserves some time to discuss questions or comments and to summarize the material [6].

The algorithmization of the healing process has become very popular as a result of the fact that the quality of medical care is constantly evaluated; quality management systems are being developed and implemented in order to improve the level of services provided in the field of medical care. It is obvious that a physician who thinks clearly and in a structured manner is able to respond more effectively and immediately, in both planned and emergency situations, which occur so frequently in medicine [5].

Visualization of algorithmic schemes of sequences of operations by means of various multimedia is an integral part of modern training and is perceived by the students as a very effective method of teaching. Combining algorithms and multimedia materials creates unique learning objects that make it possible for students to understand complex issues more carefully and deeply.

Practical work shows that in the organization of classes with medical interns and cadets, interactive teaching methods should dominate. They help to enhance the

activation in the mastering of theoretical material, form a reasoned opinion, relationships and behavioral skills, stimulate self-education, and excite interest [7, 12].

Educational discussions are a form of interactive learning, during which interns exchange their thoughts and ideas on issues under discussion. Discussions get more and more increasingly used in the preparation of interns and cadets [8, 11]. Forming the ability to critically analyze and synthesize information based on fundamental medical knowledge, as well as the ability to justify and defend one's knowledge – these skills are formed by educational discussion.

In order to encourage medical cadets and interns to work independently (because their independent work is the most valuable and important thing) and preserve motivation to study (because it is simply impossible to teach a doctors something, if he does not want to know it!), scientific and practical conferences on different topics of the curriculum are organized. For this purpose, cadets or interns prepare essays and reports on the topic of study; each speaker gets his reviewers and opponents appointed. When covering the issues of discussion, they work independently on literature sources, use Internet data, and summarize their experience in receiving patients with relevant diseases. In this way, cadets and interns are trained on their own, while the department educator is an assistant and controller of this process, which, in turn, encourages him to study the issue more extensively and deepen his knowledge.

The method of project work of cadets and interns can also be actively used [9]. Motivated study of the subject prompts the cadets to the most complete and sophisticated coverage of the material, which, in a good sense, even takes a form of competition.

Activation of the cognitive activity of a medical intern, the development and formation of clinical thinking is developed by the case method which is applied during practical classes. Case study, or case-specific method, is a teaching technique, which is based on the use of descriptions of real clinical situations [1,4]. This is a non-play-based simulation method of active learning, which is considered as a tool that allows you to use the existing theoretical knowledge in order to solve practical problems. Essentially, cases are complex situational tasks. It is advisable to use them in the absence of thematic patients related to the topic of a corresponding class, as well as in the organization of independent work of interns. Case is both a task and a source of information for a particular problem. To replenish the list of cases, both typical and non-typical interesting clinical cases of particular patients and the results of their examination are used. The tasks of the cases may include issues of diagnostics of dental diseases, differential diagnostics and drawing up a rational treatment plan for the investigated pathology.

When working on a case, doctors conduct search and analysis of additional information on related subjects. They form clinical thinking, as well as the ability to solve problems, communicate, apply subject knowledge in practice, tolerate and take responsibility. It is also important that the analysis of real clinical situations positively influences the professionalization of interns, generating interest and motivation for the study of the subject and practical activity.

At the department of dentistry of the faculty of postgraduate education, interns are actively involved in the development of skills required in scientific work. In the course of scientific research, they develop the skills of collecting material, analyzing bibliographical source data on the problem of scientific research, learning to conduct critical reviews of published works [12]. In the course of research work, interns have master the skills of processing and analysis of material, the skills of generalizing scientific research, the skills of participating in discussion and mastering new knowledge. They defend their work at inter-departmental scientific conferences.

Conclusions.

The use of innovative forms and methods of teaching in the framework of postgraduate training of interns (in the specialty: "Dentistry") and dentists contributes to the acquisition of skills of self-education, the formation of clinical thinking, as well as the activation of the learned material. Modern training of doctors in combination with traditional education is unthinkable without the use of innovative technologies that allow them to form their high competence, and ensure the quality of their future professional activity.

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