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## NEW PARADIGM IN MEDICAL EDUCATION

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**Abstract**

**New pedagogical paradigm in medical education.** This study is a review of professional articles that covering the preparation of medical staff to determine the priorities of new strategies and methods of medical education. The article focuses on the use of mobile technologies (including portable devices), the introduction of inter-professional education in medical universities, the benefits of simulative training for students using various models, dummy, simulators and virtual simulators.

**Keywords:** medical education, innovative implementation, methods of training future physicians.

**Introduction.** The education system is one of the main, relatively independent, social institutions. High pace of scientific and technological progress, intensive growth of the volume of new information, in particular, in medicine, changing requirements to the professional level of doctors, put forward the problem of improving medical education. [1]. There is a need to improve the structuring and standardization of education and training of future physicians. To overcome this problem, support, strengthening and development of the infrastructure of the medical education system is needed [2].

**The aim of the presented work** is a review of modern professional sources covering the issues of the

training of medical workers, to determine priorities in new strategies and methods of medical education.

**Results and discussion.** Evidence-based medical education plays an increasingly important role in the selection of teaching methods and the development of medical curricula and assessments. Abroad, there is a growing number of educational research projects that accompany the ongoing change in the medical education process. Regular educational academic meetings and partnerships are among the most significant as useful auxiliary structures for the future to develop a strategy and structure for the further development of medical education [3].

With the development of technologies and new methods of education, the nature of education in the medical sector has changed, and first of all, there was need to bring the study area in line with the curriculum. Modern technologies have expanded the range of spaces and places in which learning is being conducted, as well as allowed the introduction of new learning styles. A similar phenomenon was called "network learning", which is studied using four different scales, depending on the place of study: audience, building, campus and city [4].

Mobile technologies with portable devices improve the quality of learning in the basic medical education of students at their place of residence and beyond. In order to successfully use these technologies, medical teachers should be aware of the social concepts that underlie their use in preclinical and clinical educational environments [5].

Questions are one of the most powerful learning tools and best practices. They can significantly improve the quality of learning. Questions of higher level cause more profound and critical thinking. It is appropriate to ask questions to apply all cognitive domains. So that the desired learning outcomes are preserved in memory, and a good combination of questions is used during each learning session [6].

The teacher can provide a deeper understanding of the course material by Encouraging students to put their own questions. When there are no definitive answers to the questions posed, students must provide all possible answers, to show the material more deeply. Students demonstrate a higher ability to think comprehensively by using this questionable strategy [7].

The response time has an impact on the quality and quantity of student answers, as well as the initiation of further dialogue.

If students do not respond during a relatively short period of after a question is asked, teachers often try to move forward, repeating the question, or paraphrasing it. When higher-order questions are posed that require complex cognitive processes, it may be necessary to provide 1 to 2 minutes of waiting time before asking students for answers [8].

In medical education, college education has become a recognized and widespread method for improving the quality of student learning. It is suggested that learning provides educational benefits for both: student and teacher. As the learning process helps to develop a tutor's knowledge and teacher skills, collegiate learning should be supported [9]. Team Oriented Learning (TOL) is an active learning method that is designed to help students achieve course goals while studying, teamwork. It is confirmed that TOL positively influences learning outcomes, and students gain skills in teamwork [10].

Interprofessional education (IPE) aims to unite the efforts of various professionals to more effectively cooperate in providing safe, high-quality medical care to patients / clients. It is promising to introduce interprofessional education for the improvement of medical education in didactic classes and clinical conditions. Studies show that students respond well to IPE, their attitudes and perceptions improve each other. They gain

more common knowledge and skills. There are data related to changes in behavior, practice organization and benefits for patients / clients [5].

One of the aspects of the implementation of IPE is team-based learning, which is expressed in the implementation of interdisciplinary lectures. As an example is can be an interdisciplinary lecture which called "Introduction to Pharmacy". This lecture is conducted by teachers, each of which specializes in one area - cell biology, biochemistry, chemistry, pharmacology in the field of public health, pharmacokinetics and clinical science. It's shows that all items are interconnected and they have to study basic subjects in order to understand the pharmaceutical science [11].

Various models, dummies, simulators, virtual simulators and other technical means of training are also widely implemented in the Ukrainian health system. They are allow different degree of reliability to model the processes, situations and other aspects of the professional work of healthcare professionals.

The determining factors of such tendencies are some changes in health care. Worldwide attention focused on the problem of medical errors and the need to improve patient safety. It becomes increasingly difficult to get the patient's consent to participate in students's gain skills. It was necessary to create other ways of transferring medical experience and skills. It is clear that the training of a qualified doctor is not possible without contact and communication with real patients. But more often the safety of the patient and his well-being constitute a fundamental ethical problem. In teaching "at the bedside" priority still is to treat the patient, not the student's learning. Teaching clinical skills using dummies, simulators and standardized patients under the supervision of a teacher allows students and trainees to make mistakes in a safe environment.

Definitely it was shown that simulation training must precede clinical and complement it, and then it allows those who learners achieve a higher level of clinical competence.

The benefits of simulation training are: clinical experience in a virtual environment without risk to the patient; reduced stress during the first independent manipulations; unlimited number of repetitions for skills training; practice of rare and life-threatening pathologies; a part of the functions of the teacher takes on a virtual simulator; development of both individual skills and abilities of team interaction; objective assessment of the achieved level of skill. However, no trainer, no simulation technology can reproduce the real situation, including the relationship between student and teacher, patient and physician [12]. Education is an inseparable set of perceptions, thinking and effect. The communicative culture of the future doctor is one of the significant professional values that manifests itself as the ability of an individual to adequately assess other people, bringing to each patient an individual way of communicating.

Regarding the continuity of medical postgraduate education, doctors identify teaching as a factor that raises effectiveness: higher clinical efficacy rates have been associated with academic appointments during teaching versus the lack of teaching in patient care. The

results can support the encouragement of learning as a way of enhancing and maintaining high quality clinical efficacy [13].

Heads of educational institutions must structure their own program based on the volume of context, institutional needs and available resources. Emphasis is placed on a modular format curriculum, not only to improve the skills of teaching students but also development future career of teachers, scientists and managers.

The introduction of a flexible curriculum design that can meet different levels of educational needs and interests, ensuring matching between formal and hidden curricula by recognizing the value of learning, supporting the development of curricula, promoting evidence-based approaches to education and rewards for all levels of professorial- teaching staff.

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