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## Continuing medical education of family doctors through distance learning in Ukraine

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**Abstract.** Analysis of the state of scientific elaboration of the problem of distance learning in Ukraine and the experience of its implementation in the practice of higher education showed that despite some achievements, this pedagogical problem needs further research. Distance learning improves postgraduate training of doctors. The main purpose of teaching in postgraduate education is to achieve high-quality practical training based on knowledge, skills and abilities in traditional and modern educational technologies. Distance learning is a promising form of pedagogical technologies in the field of medical education, as it is more flexible and corresponds to modern realities of society.

**Keywords.** continuing medical education, family doctors, distance learning, information networks

### Introduction

The global process of transition to the information society, as well as the economic, political and social changes that accompany it, are accelerating the reform of the education system. First of all, it concerns providing access to educational and professional training for all those who have the necessary abilities and relevant knowledge [1, 2]. The most effective solution of these problems is facilitated by distance learning, which is carried out on the basis of modern pedagogical, information and telecommunication technologies [3].

To ensure the quality of medical care, the doctors must constantly improving their knowledge and skills. Currently, there are increased requirements for the level of theoretical and practical training of a doctor, the use of information and computer technology in his professional activity, which is associated with the rapid development of new areas and technologies in medicine [4]. The need for constant updating of doctor's knowledge, rapid retraining and changing the scope of their knowledge are dictated by the transition from the traditional system of postgraduate training of doctors to the system of continuing medical education [5].

Analysis of the state of scientific elaboration of the problem of distance learning in Ukraine and the experience of its implementation in the practice of higher education showed that despite some achievements, this pedagogical problem needs further research.

### **Distance learning in medicine: pros and cons**

Informatization of society and introduction of innovative approaches to the learning process have created conditions for conducting training courses using distance learning. What is meant by distance education? Distance learning is the interaction of teacher and students at a distance that reflects all the inherent components of the educational process (goals, content, methods, organizational forms, teaching aids) and is implemented by specific means of Internet technology or other means of interactivity. Distance education is widely used in advanced training courses [1, 5].

The method of teaching using distance learning technologies differs significantly from traditional learning technologies and is mainly based on independent study of the course by the student, and much of the teacher's work is translated into electronic computers [6]. In fact, educational systems "acquire" knowledge from an expert teacher and "bring" them to the student. Therefore, it can be stated that the main feature of distance education is to provide students with the opportunity to independently obtain the necessary knowledge using modern information technology. The ability to individualize learning is one of the main advantages of using information technology in the learning process.

The question of the use of this form of education in medical schools remains debatable. On the one hand, the advantages of distance education are the ability to teach a large number of students, facilitating the learning process, in the case of learning for the disabled, manufacturability – learning using modern software and hardware makes e-learning more effective, and usually distance learning is cheaper than regular learning, primarily by reducing the cost of moving, living in another city, reducing the cost of organizing the courses themselves [1, 7, 8].

Opponents of the use of distance education in medicine believe that the development of practical skills, which are the main component in the training of health professionals, in this way is impossible. However, in our opinion, the use of this form of education in medical schools is not only possible but necessary. Naturally, teaching a doctor practical skills requires traditional face-to-face contact, but all theoretical training and decision-making exercises can take place remotely. In order to properly divide the study time into distance and traditional "phases", it is necessary to carefully revise the curriculum.

Also, distance learning is an ideal and most optimal form of postgraduate training and advanced training, as it helps to solve a number of problems that arise in an already certified specialist, for example, due to different work shifts and schedules of doctors, different approaches to work and study [8, 9]. There is also the possibility of using distance learning technologies in cases of full-time students, for example, in the development of general theoretical courses.

Of course, it should be noted that medical education has its own characteristics associated with the teacher-student and doctor-patient relationships. But even in such cases, distance learning demonstrates its flexibility. The following types of distance learning are possible: without the presence of a teacher, in the case of mastering a theoretical course, with the partial presence of a teacher, during practical and laboratory classes.

Distance learning improves postgraduate training of doctors. The main purpose of teaching in postgraduate education is to achieve high-quality practical training based on knowledge, skills and abilities in traditional and modern educational technologies. Innovations in postgraduate education include the introduction of distance learning internships in the technology of training doctors. Distance learning involves several different technologies that can be used in the learning process: case technology, internet technology and

telecommunications technology [9, 10]. The choice of training technology depends on the needs of the doctor, his capabilities, the amount of time for training.

The effectiveness of distance learning at the postgraduate stage of education of doctors is determined by: the effectiveness of interaction between teacher and doctor; active feedback; the quality of preliminary design of the distance education process and means of its management; development of didactic materials. The technology of work consists in interaction of teachers of department with doctors by means of modern telecommunication Internet-technologies, and means of realization of similar interaction are e-mail, teleconferences, dialogues in a real-time mode, etc. During the live broadcast, a multimedia presentation is performed, which is one of the options for preparing a doctor for the lesson [11].

With the help of Internet-technologies the study of methodical developments for classes and materials for interactive reading and testing are provided. Also for the educational process use videos of clinical cases and situations from medical practice [9, 11]. The videos help in the differential diagnosis of diseases in each case, diagnosis, determination of the required amount of examinations, interpretation of research results and determination of patient management tactics.

In modern conditions, which require constant systematic updating of professional knowledge and skills of the specialist, the possibilities of user access to various information resources, including multimedia, are growing. Distance learning is based on the use of modern information technologies and means of communication (television, video and audio teaching aids, computer global and local networks).

### **Organization of the educational process in postgraduate medical education**

Training in accordance with the principles of continuing medical education, which uses distance learning technologies, has both positive and negative aspects. It is not expected that distance education will gradually replace the traditional, but only complement it and expand its capabilities. Distance learning requires students to have some basic knowledge, including online skills. Appropriate technical support for participants in the educational process (both for the department and for students) is also needed.

In particular, the department uses the Moodle system. With its help the current and intermediate testing of listeners is carried out, educational and methodical materials and tasks for independent work of listeners are stored in it. The tasks performed by the students are sent to the department by e-mail.

Direct provision of the educational process with all the necessary teaching materials is also a very important task. These materials are presented in the Moodle system. In addition, during the classes it is necessary to provide students with appropriate handouts and/or textbooks in paper form in order to effectively conduct practical classes. The preparation of printed materials should also be properly organized. In addition, students should have carefully developed guidelines for independent work and, of course, had access to the necessary textbooks and manuals, in particular, through the Internet and the possibility of distance communication with teachers.

An important role in further improving the organization of the educational process is played by the final anonymous survey of doctors. In the questionnaires, they express their comments and suggestions for improving its organization and conduct. These comments are analyzed at meetings of the department and, if necessary, lead to further adjustment of the educational process.

Thus, with minimal human and technical resources, it is possible to organize distance learning courses in parallel with traditional teaching methods. The basis for the introduction of

these technologies can be trial courses organized on the basis of certain departments of the educational institution, and in clinical departments on the basis of treatment and prevention facilities. At the same time, the system of distance learning and advanced training of medical professionals should consist of the following components: conducting distance lectures, conducting seminars with in-depth study of previously read lecture material; practical classes on various methods of diagnosis, treatment and surgery, as well as individual telemedicine consultations.

The level of development of the doctor is assessed by his ability to independently acquire new knowledge and use them in educational and practical activities. Independent work occupies one of the leading places in the formation of creative activity. Only purposeful systematic independent work of each doctor allows to deeply master knowledge, to develop and consolidate skills, to turn them into the corresponding skills of mental work.

Among the important problems and shortcomings of the distance form of education in Ukraine is the shortage of direct contact between the personal teacher and the distance student due to the extreme professional workload of domestic teachers. Unfortunately, in Ukraine we have a lot of people willing to receive distance education, and there are few experienced teachers who are familiar with the latest technologies of distance communication.

But despite the shortcomings, distance learning technology is a powerful means of cognition. To increase the effectiveness of new information technologies in teaching, it is necessary to form a system that provides a different understanding of the essence of learning, the role of teacher and students in this process, the relationship between teacher and students, equipping teachers and students.

### **Conclusions**

Distance learning is a promising form of pedagogical technologies in the field of medical education, as it is more flexible and corresponds to modern realities of society. Distance education at the postgraduate stage provides doctors with the opportunity to independently acquire the necessary knowledge, using modern information technology, as distance learning requires a doctor a high level of professional and cognitive motivation, self-control and self-discipline.

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