

## THE OPPORTUNITIES OF SIMULATION TRAINING AT THE MEDICAL UNIVERSITY

Kudratova Zebo Erkinovna Assistant of the Department of Clinical and Laboratory Diagnostics;

Tuychiyeva Saboxat Kurakbayeana Assistant of the Department Organisation of the Pharmaceutical Business Samarkand State Medical University Samarkand, Uzbekistan

## **Annotation**

The use of simulators, mannequins, phantoms allows you to repeatedly work out certain exercises and actions while providing timely, detailed professional instructions during work. It is the simulators that can repeatedly and accurately recreate important clinical scenarios and the ability to adapt the learning situation for each student.

**Keywords**: practical skills, simulation training, simulation educational technologies, mannequin, practical skills, modern medical education, medical education problems and solution methods.

Simulation training is a fairly new educational technique that is used in medicine. The use of simulators in healthcare is safe for patients, it allows you to simulate various critical situations in conditions close to real ones. At the present stage of development of higher medical education, the use of modern phantoms and simulators in the educational process is relevant [1]. This is due to the fact that it is not always possible to show certain pathological conditions at the clinical bases of departments. Simulation training in medical education is used to create conditions and develop algorithms for medical manipulations, including in emergency and extreme situations. This is due to the need for training for the mandatory simultaneous elimination of problems.

The uniqueness of the simulation training method is manifested in the possibility of using a repeated repetition in a single-type specified model conditions on simulators, simulators or with the help of other equipment to bring skill that requires meticulous accuracy, speed and standardization (any cognitive or manual actions carried out in the profession automatically, without consciousness control ) to automatism, which in the field of medical activity, otherwise, can provide only long years of practice and an abundance of patients [3,5].



The introduction of simulation training in the educational process requires the scientific and pedagogical staff to have knowledge and skills to use special teaching technologies in various specialties, for example, in therapy, surgery, obstetrics and gynecology, traumatology, endocrinology, anesthesiology and intensive care and others.

The presence of mannequins, phantom models, a complex of simulators for practicing practical skills for intravenous, intramuscular, subcutaneous, intradermal injections, a training model for cardiopulmonary resuscitation, a mannequin for care and resuscitation with equipment controllers enables a significant number of students and doctors to study, pass exams, to practice certain manipulations and practical skills [1,2,19]. Simulators, phantoms, simulators are mechanical and computer devices, thanks to which students and doctors can practice numerous clinical manipulations. Mannequins with individual elements, feedback, sound, with an automatic physiological response provide a real approach to the multiple provision and monitoring of medical care for people, which is difficult to achieve in clinics and at the patient's bedside [3,16,17,18].

Simulators provide the possibility of a plurality of repetitions of practicing practical skills, which entails a significant reduction in the number of medical errors and possible complications when performing manipulations. During the training, not only clinical skills, but also the ability to communicate with colleagues and patients. For this, special simulators, simulators have been created, and game teaching methods have been developed that allow you to simulate various clinical situations, including rare ones [3,6,10,11,12,13,14,15].

The work of the simulation center depends on many factors: the availability of specialized facilities designed to accommodate existing equipment and students, the organization of the learning process [5,6]. The use of simulators makes it possible to assess the level of acquired knowledge and acquired skills and abilities, as well as to predict the real outcome of manipulations carried out in real conditions, to fix the algorithm for performing skills, taking into account unexpected unforeseen situations [4]. To ensure the high quality of practical training, just the availability of simulators is not enough. It is necessary to use certain pedagogical technologies that ensure the continuity of the system of formation, development and improvement of practical skills and preparation for professional activities at all stages of training of medical personnel [4,5,17,18,19,20].

The use of information technology in the educational process requires the availability of qualified teachers capable of working in a new information and educational environment. The instructor - teacher and students, as well as teaching and auxiliary personnel, participate in training simulation courses. The teacher or instructor demonstrates a clinical case, performs work using a simulation object [6,9,13,16]. During the simulation, it is recommended to conduct video recording or other fixation of exercises.

Training in a simulation center provides high digestibility of the material being studied and the possibility of an objective assessment of the level of training of students, clinical residents and cadets in connection with the modernization of thinking in general, as well as improving and enriching the pedagogical approaches of teachers to students [2,7,14,15].

Thus, the simulation technology, of course, is communicative, since it involves establishing contact and interaction between participants in the educational process. Information, penetrating into consciousness, initiates its active work and, as a result, starts the reverse information process, response and action [8,9,10,12,21].

## References

- 1. Dikman P. Simulation and safety of patients / P. Dikman, M. Mor // Materials of the 1<sup>st</sup> All-Russian conference on simulation training in critical care medicine with international participation, Moscow, 2012. M, 2012. P. 44-50.
- 2. Pakhomova J. V. The role of virtual simulators in educational process of doctors' training / J. V. Pakhomova // Medical education and simulation training: conf. Mainz, Germany, on the 26-27 of November, 2011. Mainz, 2011.
- 3. Cooper J.B., Taqueti V.R. A brief history of the development of mannequin simulators for clinical education and training // Postgrad Med J. -2008. № 84 (997).- P. 563-570.
- 4. Clinical simulation: importance to the internal medicine education mission / P.E. Ogden, L.S. Cobbs, M.R. Howell, S.J. Sibbit, J.Di- Pette // Am J Med.- 2007. № 120 (9).-P 1-4.
- 5.Murin S. Usage of simulators in training: turning point / S. Murin, N. S. Stollenverk // Virtual technologies in medicine: scient. pract. journ. 2010. Nº 1 (5). P. 7-10.
- 6. Imitating training in system of continual medical professional education / Under the editorship of the member correspondent of the RAMS P. V. Glybochko. M: Publishing house of the 1st MSMU n.a. I.M. Setchenov, 2012. P 120.
- 7. Murin S. Usage of simulators in training: turning point / S. Murin, N. S. Stollenverk // Virtual technologies in medicine: scient. pract. journ. 2010. Nº 1 (5). P. 7-10.
- 8. The all-Russian system of simulation training, testing and certification in health care / N.B. Naygovzina, V. B. Filatov, M. D. Gorshkov [etc.] // Virtual technologies in medicine: scient. pract. journ. 2013. Nº 1 (9). P. 8. jour. 2013. Nº 1 (9). P. 8.



- 9. Кудратова З. Э., Мухаммадиева Л. А., Кувандиков Г. Б. Особенности этиопатогенеза обструктивного бронхита и ларинготрахеита, вызванных атипичной микрофлорой //Достижения науки и образования. 2020. №. 14 (68). С. 71-72.
- 10. Возрастная анатомия, физиология и гигиена: учебное пособие / Т.А. Аникина и др.; Казань: 2013., С-134.
- 11. Kudratova Z.E., Rustamova G.R., Hamedova F.S. F. Laboratory markers of perinatal hypoxic damage to the central nervous system in newborns //Наука, техника и образование. 2020.  $N_{\odot}$ . 10 (74). С. 102-104.
- 12. Камалов Т. М. и др. Клинико-гормональная характеристика первичного гипогонадизма у мальчиков дошкольного возраста //Медицина и фармацевтика. 2019.  $N^{\circ}$ . 9. С. 17-20.
- 13. Сабирова Д. Ш., Юлдашев У. К., Камалов Т. М. Структурные изменения сосудисто-стромального комплекса щитовидной железы при эутиреоидной и токсических формах зоба //Научный журнал. 2019. №. 10 (44). С. 67-69.
- 14. Бахриев Н. Р. и др. Изменения уровня хг в системе мать-плацента-плод при резуснесовместимой беременности //Academy. 2020. №. 4 (55). С. 93-95.
- 15. Бахриев Н. Р. и др. Особенности эндокринной функции фетоплацентарной недостаточности при резус-отрицательной беременности //european research: innovation in science, education and technology. 2019. с. 101-104.
- 16.Kudratova Z. E. et al. The Role of Cytokine Regulation in Obstructive Syndrome of Atypical Genesis in Children //Annals of the Romanian Society for Cell Biology. 2021. C. 6279–6291-6279–6291.
- 17. Kudratova Z.E. et al. Bronchial obstruction syndrome in young children with respiratory infections of different etiology: features of clinical manifestations and immune response //Проблемы науки. 2021.  $N^{\circ}$ 2. 1 (60). C. 60-62.
- 18.Kudratova Z. E. et al. Chlamydial Infections (Intracellular Infection) in the Development of Bronchitis //TJE-Tematics journal of Education ISSN. 2021. C. 2249-9822.
- 19. Набиева Ф. С., Ибрагимова Н. С., Умарова С. С. Инструментальные и лабораторные методы исследования для ранней диагностики эхинококкоза //Вестник науки и образования. 2020. №. 24-4 (78). С. 47-49.
- 21. Набиева Ф. С., Кудратова З. Э., Кувандиков Г. Б. Роль Saccharomyces cerevisiae в развитии современной биотехнологии //Достижения науки и образования. 2021.  $N^{\circ}$ . 5 (77). С. 57-60.