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5. Benyuk V. O., Kovalyuk T. V., Nikonyuk T. R., Benyuk S. V. Features of nutrition and assessment of macro- and microelement of pregnant. Neonatology, surgery and perinatal medicine. 2012. № 3. P. 68-73.

6. First European Action Plan for Food and Nutrition for 2000-2005 years. Regional Office for Europe WHO. 1999. 58 p.

7. Petrishchenko L. M. Features of actual nutrition of the working population living in radioactively contaminated areas of Ukraine: thesis abstract. – Kyiv. 2011.30 p.

8. Polka N. S., Hulich M. P., Mahnyuk V. M. Hygienic assessment of catering schools of pupils in modern conditions. Environment and Health. 2006. № 3. P. 62-66.

9. Prodanchuk M. G., Koretsky V. L, Orlov N. M. To the problem of Ukrainian population food safety. Problems of the nutrition. 2005. № 2. P. 3-6.

10. Serdyuk A. M. Ecological and hygienic problems of nutrition. Journal of Medical Sciences of Ukraine. 2002. V. 8. № 4. P. 677-684.

11. Spirichev V. B. Scientific justification for the use of vitamins in the prevention and treatment purposes. Message1. Lack of vitamins in the diet of nowaday man: causes, consequences and ways of correction. Nutrition. 2010. T.79. № 5. P. 4-13.

12. Tsypriyan V. I. Hygienic evaluation of actual nutrition of young women with risk of iron deficiency. Hygiene populated cities. Kiev. 2001. Vol 2, Vol. 38. P. 229-234.

EXPERIENCE OF USING SIMULATION-BASED MEDICAL TRAINING IN KHARKIV NATIONAL MEDICAL UNIVERSITY

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The Training Laboratory of Monitoring is a structural subdivision of the Training and Scientific Institute of the Kharkiv National Medical University. The training laboratory of monitoring and quality management systems was created in 2015 with the aim of implementing of new technologies and methods for the improvement of the educational process and monitoring practical skills' mastering by students of medical faculties. The simulation classes were created with a wide range of

simulators for sharpening practical skills and highly real computer and virtual simulation of various clinical situations. In current work we want to analyze the pros and cons of the simulation-based medical training.

The modern stage of social development puts new demands for doctors, and, therefore, requires the transformation of a higher medical education. Despite the rapid development of electronics and computer technology, it is still not unusual that medical students are taught the same way as they were decades ago. The acquisition of appropriate practical skills is crucial point of the medical education; however, medical residents very often complete their academic programs armed with theoretical knowledge but lack many of the clinical skills vital for their future work. Therefore, a major challenge for medical undergraduates is the application of theoretical knowledge to the management of patients.

One of the pressing issues in the process of practical training of a future qualified doctor is the lack of direct contact and communication with real patients. Obtaining the patient agreement for medical examination and care in order to enhance student's professional skills is increasingly difficult. In view of the foregoing, simulation training significantly overcomes the gap between the theoretical training of a student and getting their clinical experience in the system of higher medical education.

Simulation is a modern technology for teaching and evaluating practical skills, based on realistic modeling, imitating the clinical situation for which the educational models are used in various complexity and realism. While the unsystematic use of inanimate and live simulators is reported along the history of medicine, the origins of medical simulation as we know nowadays comes from other science: aviation.

Like everything in this world all the approaches of the simulation-based medical training have advantages and disadvantages. Many people believe that simulation may play a central role in a student-directed learning model. On the one hand, it may help to create clear algorithms of action, since it imitates real life situations and gives students the chance to practice procedures. This is particularly important in emergency situations that require immediate lifesaving intervention. Moreover, simulation-based medical training provides an unlimited number of repetitions for skills training.

It should be kept in mind that one of the main bioethical principles taught to all healthcare professionals worldwide is the «Do not harm». Simulation provides the conditions in which students can practice medical skills to be better prepared for clinical encounters, potentially reducing detriment risk. Very often medical students feel uncertain while performing their first manipulations. Using simulators improves psychological readiness of students because in such conditions there is no fear of making a mistake. At the same time, students have the opportunity to master practical skills gradually and implement clinical algorithms both virtual ones and while working in a team with simulation patients, which maximizes the effectiveness of training and reproduces the real working conditions of a specialist in the future. Motivation to learn and to transfer classroom knowledge is strengthened

when students encounter patients in the clinical practice with conditions similar to those portrayed in simulation.

Last but not least, simulation can benefit the individual learner, the multidisciplinary team, and the hospital as a whole. Immersive simulation promotes theory-practice integration in team and strengthens communication among team members.

On the other hand, a critical aspect of simulation is constant feedback that refers to the lack exchange of information between student and machine. Human systems are very complex and diverse. Lots of information is gained from humans, not instruments. Even the best robots can not fully replace a human. Some physical findings like skin colour cannot be taught in simulators. Participants will always approach a simulator differently to real life. In addition, no real consequences for mistakes may result in students while performing and not being fully engaged in the training, thus, producing inaccurate results.

During the global economic crisis the price issue often comes to the fore in all spheres of life. Unfortunately simulators can be very expensive and require constant updates and maintenance. Hence, they are not affordable to many teaching hospitals and medical institutions.

Taking into account all the above, can be concluded, that simulation-based medical training has more advantages than disadvantages. Medical simulation offers numerous potential strategies for comprehensive and practical training, and safer patient care. Simulation by itself does not guarantee learning, but within the proper environment, it is a tool of paramount importance for implementation theoretical knowledge into practice. The positive return on investment for simulation makes it worthwhile for medical education.

Up to date, five educational virtual clinics have been set up already at the educational and research institute of the Kharkiv National Medical University in the following areas: pediatrics, surgery, obstetrics and gynecology, therapy, emergency medicine, equipped with exercises machines and simulators. This equipment is actively used in the educational process during practical classes with students. In view of the foregoing the use of this innovative technology encourages students to self-confidence and development of teamwork skills, which will further reduce the risks of erroneous actions and decisions in practice.