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МАТЕРІАЛИ З НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ З МІЖНАРОДНОЮ УЧАСТЮ "МЕДИЧНА СИМУЛЯЦІЯ- ПОГЛЯД У МАЙБУТНЄ"

MODERN PECULIARITIES OF SIMULATION TECHNOLOGIES IN THE MEDICAL EDUCATION

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Introduction. The traditional approach of medical education is tocontinually reduce healthcare tasks to simpler or smallercomponents, such as facts and simple skills, for theof teaching. However, healthcare tasks frequentlyvary with the need to adapt to particular situations andlearners taught in this manner may not be able tograsp thedynamics of variation and adaptation to integrate or link thevarious components in a way that is clinically meaningful andrelevant.

The effectiveness of simulation-based medical education has been analyzed in a recent meta-analysis. Simulation, in comparison with no intervention or when added to traditional practice, was associated with better learning outcomes.Effects were large for knowledge, skills and behaviors, and the confidence intervals excluded small associations. Effect sizes for patient-related outcomes were still moderate.

The main part. To overcome problems of compartmentalizationand fragmentation, modern educators adopt a holisticapproach and make use of authentic tasks to promoteintegrated learning. Authentic tasks are obviously availablein the real clinical environment, but simulation is a usefuladjunct to learning with real patients for a number ofreasons:

1. Control over the sequence of tasks offered tolearners. For educational purposes learners shouldstart with easier tasks and then proceed to morechallenging ones. However, in the real world, it is notalways possible to control what tasks are availableat the time of training. On the other hand, it ispossible to provide learners with tasks of a suitablelevel of challenge in a simulated environment.Furthermore, simulated tasks are reproducible andcan be standardized for training and assessmentpurposes.

2. Opportunity to provide support and guidance.Learners require support and guidance in learning,which may not always be available in a real clinicalsetting. This is particularly important as thetraditional apprenticeship model, based on theprolonged and repeated interactions betweenjunior and senior healthcare professionals, isincreasingly under threat owing to changes in thehealthcare system. The ability to pause, restartand replay a clinical encounter provides invaluableopportunities to apply educational principles to theclinical setting.

3. Prevention of the unsafe and dangerous situations. It isimportant for learners to experience failure, and torecognize when they are approaching or crossingthe limits of their competence. However, growingconcerns about patient

safety made the idea ofinexperienced trainees practicing their skills onreal patients morally unacceptable. The simulatedenvironment provides opportunities for learners topractice without the risk of harming patients.

4. Creationthe tasks that rarely occur in the real world. Someclinical scenarios, such as malignancy hyperthermiaor para-mortem caesarean sections, happen rarelyand it is much better for learners to learn in asimulation environment rather than waiting for thesesituations to happen in a real clinical setting.

5. Creation the tasks that would otherwise be impossibleowing to limited materials or resources. The design of the educationactivity should take into account the nature and assumptionof adult learning.

There are a number of elements that areneeded in order to create an effective learning environmentfor medical students using full-scale simulation:

1. A team of learners who interact as they have doneor would do in real situations.
2. An environment resembling a real clinicalenvironment.
3. Equipment that they would use in real practice.
4. Learning experience that is problem centered and isclose to real clinical encounters.
5. Learners need to feel safe to express themselves.
6. Learners receive timely feedback from differentsources.

Conclusions. Standardization in simulation modality, equipment andenvironment are crucial to achieve consistent results inresearch with the same objectives and learning outcomes.More detailed descriptions of the context includingsimulation modalities and instructional design withinwhich the interventions occurred in simulation researchhave been recommended.

The development of a quality assessment guide for simulation scenario as well as learning exercises in simulation-based education may help to guide the accumulation of high-quality evidence for healthcare simulation for education and training. The greatest benefit of simulation-based education is the ability to provide an experience by immersing and engaging learners in an artificial environment that captures their attention and exposes them to important contextual characteristics relevant to their performance.

This well-designed simulation learning is particularly well received by younger learners who have grown up in an internet and game-based environment. Although simulation-based education is becoming increasingly popular, a number of barriers remain to its greater acceptance and utility.

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CHALLENGES OF ONLINE MODALITY IN HIGHER EDUCATION

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In the rapidly evolving landscape of education, the traditional classroom setting falls short of meeting the demands for efficiency, personalization, and learner-centered experiences. Embracing technology becomes imperative to ensure a compatible, flexible, and motivating learning environment. Prominent learning platforms such as Coursera and EdX, interactive boards like Figma and Miro, and tools like Kahoot! and Quizlet have become integral components of modern educational discourse.

In addition to a strong motivational component technologies in education aim to solve a wide range of serious issues. Thus, UNESCO's Global Education Monitoring Report in 2023 emphasizes educational technology's role in addressing current challenges: equality of educational opportunities, quality, and efficiency. While personalized adaptive software holds the potential to improve learning, not