

EXPERIENCE-BASED TEACHING OF ACUTE MEDICINE FOR EXTRA MOTIVATED MEDICAL STUDENTS AND YOUNG PHYSICIANS— 4TH EMERGENCY MEDICINE COURSE AND 6TH AKUTNĚ.CZ CONGRESS

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ABSTRACT — Faculty of Medicine of the Masaryk University (MU), and especially its departments focusing on acute medicine, make an active effort to find and to support extra motivated students by organising courses and congresses with simulation-based learning sessions for them. 4th Emergency Medicine Course (EMC) and 6th AKUTNĚ.CZ Congress were organised during 2014. EMC was held during a weekend in mid-April for 80 medical students. The congress was held on 22 November 2014. A group of more than 700 enthusiastic professionals including physicians, nursing staff and medical students interested in acute medicine met again in Brno at the University Campus Bohunice. We also report the evaluation of effectiveness of different types of sessions, as well as its influence on practical skills and the fixation of memory footprint. The website AKUTNĚ.CZ (www.akutne.cz) is freely accessible, and anyone can find and watch all the videos and presentations there.



Rising numbers of medical students and related limitations (spatial, economic, personnel, lack of appropriate didactic cases) have led to a crucial shift from traditional methods of teaching and learning to modern ones. Simulations are among suitable options.

SIMPLE AND ADVANCED PATIENT SIMULATORS

Among the most common simulators in the process of acute medicine teaching, there are mechanical simulators of propaedeutic skills (peripheral or central vein or artery cannulation, regional anaesthesia techniques, etc.) on the one hand, and comprehensive patient simulators for acute clinical scenarios on the other hand. The advanced simulators can be enriched with complex physiological models.

STANDARDIZED PATIENT

A properly masked and instructed actor is the next step when aiming to increase the credibility of

simulation of clinical situation. Nevertheless, due to its personnel and time requirements, it is mainly used only for single events and exercises.

EDUCATIONAL AND PUBLISHING PORTAL AKUTNĚ.CZ® [ISSN 1803-179X]

The first chapter of a successful project of educational and publishing portal AKUTNE.CZ [ISSN 1803-179X] began in 2007. AKUTNĚ.CZ is nowadays part of the network of Czech and Slovak medical faculties for the development of e-learning, called the MEFANET (Medical Faculties NETwork). Over the past six years, the portal has undergone a rapid development, and

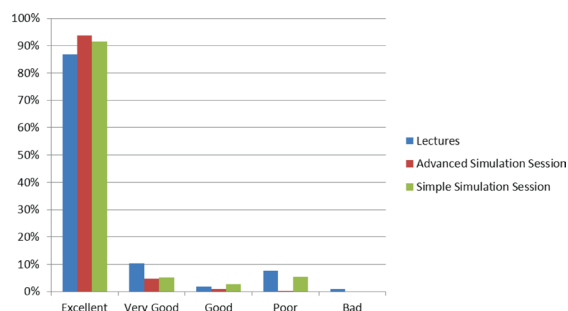


FIGURE 1 Evaluation of effectiveness of different types of sessions and its influence on practical skills and fixation of memory footprint during the Emergency Medicine Course (n = 78)

followed up on its activities to several other projects. The portal focuses its activities on senior medical students and provides comprehensive information on acute medicine: like an invisible line, this clinical field goes through all clinical disciplines. Another goal was to bring a new perspective into the education of emergency medicine, and to involve the direct development of teaching materials among the modern methods of teaching of clinical skills. Students themselves nowadays present an essential part of the AKUTNĚ.CZ team, taking part in individual projects and thus gaining their first experience in clinical, organisational, and publishing field of emergency medicine.

Where should a medical student gain experience with the practical implementation of the above-mentioned modern simulation techniques? Each year, two important events focused on teaching emergency medicine for motivated students, involving the implementation of advanced simulation techniques, are held at the Faculty of Medicine at MU. We provide short characteristics of this year's events, and the comparison of participants' satisfaction with prior lessons/workshops with (standardised patient and advanced patient simulator) or without advanced methods (mannequins, simple simulators).

4th EMERGENCY MEDICINE COURSE

The Emergency Medicine Course always takes place in the spring in cooperation with all three Anaesthesiology and Intensive Care Medicine departments of the Faculty of Medicine of MU and Emergency Medical Services for two regions of the Czech Republic. Students themselves became the initiators of a two-day workshop. More than 300 students from the 4th, 5th and 6th year of the Faculty of Medicine of MU completed the course during the past four years.

An evaluation survey was performed, showing that even students themselves perceive the practical benefit of lessons using advanced simulation techniques

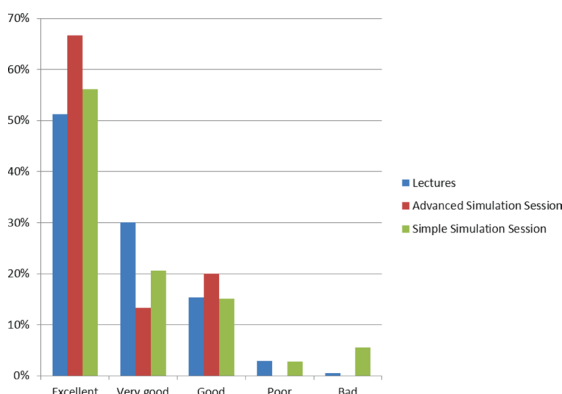


FIGURE 2 Evaluation of effectiveness of different types of sessions and its influence on practical skills and fixation of memory footprint during the 6th Congress AKUTNĚ.CZ (n = 198)

(patient simulator, standardised patient) compared to those using simple simulation techniques or just lectures (Figure 1).

6th CONGRESS AKUTNĚ.CZ

The onset of autumn sleet and depression was brightened by the 6th year of an already traditional event: the Congress AKUTNĚ.CZ. It is no coincidence that the term is close to the International Student's Day because the conference is unique in its focus on senior medical students and young physicians. Beside the main section, there were two parallel sections focusing on nursing staff and on hot topics in anaesthesiology (toys for anaesthesiologists, anaesthesiology case reports from delivery room, simulation in acute medicine). This year's congress had a record attendance of more than 720 participants (446 in medical section; 150 of them were medical students), who could choose among 26 presentations in the medical section, and 16 presentations in the section for nursing staff. Figure 2 shows the evaluation of effectiveness of different types of sessions and its influence on practical skills and fixation of memory footprint during the 6th Congress AKUTNĚ.CZ.

HANDS-ON WORKSHOPS

In light of the fact that the congress intentionally focuses on young physicians and medical students of higher grades of study, there are hands-on workshops called 'It's about time...'; a workshop oriented on the management of difficult airways, bronchoscopy workshop, Advanced simulator of acute patient — METI® oriented on medical students, Communication with difficult patients, Coagulopathies and ROTEM® Basic, and Advanced or workshop of ultrasound navigated regional anaesthesia. This year's innovations involved



FIGURE 3 AKUTNĚ.CZ Congress — mechanical simulator: bougie-assisted cricothyrotomy



FIGURE 4 AKUTNĚ.CZ Congress — advanced patient simulator: METT®



FIGURE 5 Emergency Medicine Course — standardised patient: immobilization techniques

the HAL advanced patient simulator, laparoscopic (LAP Mentor®), as well as ultrasound (U/S Mentor®) virtual reality simulators Simbionix.

What next? Some photos of extra motivated students during courses and congresses (Figures 3–6) and ... just SAVE the DATES ... 7th congress AKUTNĚ.CZ ... 21 November 2015 and 5th Emergency Medicine Course ... 11–12 April 2015 ... in Brno.

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FIGURE 6 Emergency Medicine Course — mechanical mannequin: orotracheal intubation