

Abstract

Background: Medical simulation is becoming increasingly important in the education of healthcare professionals. It is an interactive method that effectively supports the improvement of quality in education. This thesis focuses on the creation of educational and testing scenarios for critical care teaching that are used for hands-on training and assessment of students' skills and knowledge.

Aim: The aim of this thesis is to create automated simulation scenarios for both educating and testing students in the critical care field which will also serve as a study material helping the students to be able to better review the simulation procedures.

Methodology: A combination of relevant literature, consultation with experts in the field of simulation education and technicians as well as the use of SimDesigner simulation software from LAERDAL Medical were used to develop the scenarios.

Pilot testing of the scenarios was carried out with the participation of the students, and the feedback received was an important part of further modifications and consultations. The final test was the use of the simulation scenario in the Objective Structured Clinical Examination (OSCE) for the first year students of the Master's degree in Intensive Care Medicine at the 3rd Medical Faculty of Charles University.

Results: The developed educational and testing scenarios provide material for conducting simulation-based teaching as well as a study material for students to practice critical care procedures.

Conclusion and recommendation: It is recommended that standards be developed for the creation of simulation scenarios to facilitate and speed up the creation of simulation scenarios so that they are efficient and consistent.

Keywords: simulation, simulation in medicine, debriefing, critical care, education