Simulation-based education as part of the pediatric curriculum - Comparison of self-assessment and theoretical knowledge in neonatal resuscitation.

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Introduction: Simulation has been widely implemented into under- and postgraduate medical education within the past decades [1]. Therefore, we implemented an elective simulation-based course aiming to teach structured assessment and cardiopulmonary resuscitation (CPR) of newborns, and common neonatal diseases (e.g. transitory tachypnea of the infant, bacterial infection, hypoglycemic seizure, meconium aspiration). We evaluated student’s self-assessment and their theoretical knowledge of neonatal resuscitation at the beginning of the elective simulation-based course.

Methods: We performed a survey, utilizing a questionnaire with 7 self-assessment questions and 10 theoretical resuscitation guideline questions. After finishing the elective simulation-based course, the same questionnaire will be administered.

Results: 20 questionnaires were analyzed. 10/20 students already participated in basic neonatal and infant resuscitation training prior to our elective simulation-based course. Except one, all other students estimated their basic knowledge in neonatal assessment, resuscitation and most common diseases to be little or zero. Except for 4 students, the majority estimated their knowledge in neonatal CPR and mask ventilation to be poor. Only half of the students (53%) were able to answer questions concerning resuscitation guidelines for newborns (e.g. ratio of ventilation and heart compression, depth of heart compression, first steps in treatment) and assessment of the newborn (Apgar score) correctly.

Conclusion: Self-assessment of medical students was in accordance with basic theoretical knowledge in neonatal assessment, resuscitation and most common diseases. We emphasize the need for both theoretical as well as simulation-based skills training to improve and consolidate resuscitation procedures in neonates.

References: