

## [A-14] A Multidisciplinary Approach to Simulation-based Advanced Pediatric Airway Management

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**Objective:** Design and assess a multidisciplinary simulation-based advanced pediatric airway management course to instill the importance of communication and cooperation across subspecialties, familiarize trainees with the use of different airway adjunctive equipment, and increase understanding of airway management as it relates to different subspecialties.

**Methods:** Pediatric trainees from Anesthesia, Emergency Medicine, Critical Care and Otolaryngology participated in a one-day workshop consisting of lectures, skills stations, case discussions, and complex difficult airway simulations. Emphasis was placed on making the skill station and simulation small groups a blend of trainees from all the subspecialties to promote communication and sharing of concerns related to the respective subspecialties. Pre- and post- workshop questionnaires were completed.

**Results:** 14 trainees, ranging post-graduate years 3-10, participated. Prior to the course, only 36% felt competent following the hospital's critical airway pathway and 43% knew the location of advanced airway management equipment. In the course of the day, those trainees with skills in one area taught them to those in other subspecialties. In addition, specific concerns of each subspecialty were shared during the simulations. Pre to post-course improvement in confidence in advanced airway management skills and in ability to effectively communicate with other disciplines was significant ( $p < 0.05$ ). The majority (92%) felt the multidisciplinary format helped develop team communication skills and preferred it to single discipline training.

**Conclusions:** Simulation-based airway management educational courses are not unique, but typically are single specialty. Pediatric respiratory failure is frequently managed by multiple sub-specialists and successful care requires smooth multidisciplinary teamwork. Complex handoffs make an understanding of another subspecialist's concerns a valuable asset in that communication. Multidisciplinary education to teach advanced airway management, teamwork, and communication skills is effective, preferred by learners, and possible to achieve despite training differences. This format highlighted unrecognized knowledge gaps between disciplines and emphasized the benefits of collaboration. Multidisciplinary educational programs have the potential to be a valuable addition to training programs as they prepare trainees to provide the integrated care that is required for their professional careers.

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