

Teaching Second Year Medical Students Airway Skills

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Introduction

Medical students are introduced to basic airway management and other medical procedures through a variety of methods. The Clinical Procedures Course, offered late in the second year, provides every student with a foundation in patient care procedures prior to entering the third year clinical rotations.

Anesthesiology, critical care medicine, emergency medicine, urology, orthopedic and pediatric faculty participate in the course. One course session, "Hold your Breath", focuses on respiratory evaluation and airway management skills. It includes instruction on these skills to a participant group usually with no prior skill in this domain.

Methods

All second year medical students participate in this course. Each group of 50 students per day are further divided into 5 groups of 9-10 students that rotate through one of five concurrent stations. The stations include: 1) a video oriented discussion of a patient in respiratory distress 2) an airway mannequin station (in 2001 and 2002), changing in *2003 to high fidelity adult patient simulators: where performance of airway maneuvers, mask ventilate, and intubate are demonstrated and practiced; 3) a simulation session utilizing different scenarios involving respiratory first response and respiratory therapy measures; 4) a facilitated interpretation of abnormal chest x-rays that builds on students' pre-study of normal anatomy; and 5) an interactive pediatric airway station.

Results

The table below contains global course evaluations obtained from 168 of 444 students. The didactic rating portion indicates traditional teaching and syllabus material.

"Hold Your Breath" - Student Evaluations 2001/2002/*2003					
Student rating	A = Outstanding	B = Good	C = Satisfactory	D = Fair	E = Poor
Didactic Rating	23/76 = 30.3 % *42/79 = *53.2%	32/76 = 42.1 % *19/79 = * 24.1%	17/76 = 22.4 % *12/79 = * 15.1%	4/76 = 5.2 % *3/79 = *3.8%	0/76 = 0 % *3/79 = *3.8%
Small Group Rating	50/89 = 56.2 % *71/79 = *89.9%	30/89 = 33.7 % *6/79 = *7.6%	8/89 = 9.0 % *2/79 = *2.5 %	1/89 = 1.1 % *0/79 = *0%	0/89 = 0 % *0/79 = *0%

Discussion

Opportunities for the students to have "hands on" participation are the highest rated. Small group sizes make the interaction personal, non-threatening, and interactive between facilitator and participants. Student satisfaction with the incorporation of higher fidelity patient simulators is apparent, evidenced by higher evaluation response rates and small group ratings. Future plans incorporate even greater use of high fidelity patient simulators (e.g. Sim Baby) in the course, incorporation of laryngeal mask airway skills, and assessment of the degree of retention of the airway skills acquired during this session in future third year perioperative medicine rotations.

References

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2. [Dashfield AK](#). Psychomotor function and learning clinical skills: a critical appraisal. J R Nav Med Serv. 2001;87(3):140-7.