

MEDICAL EDUCATION SCHOLARSHIP CENTRE Medical Education Scholarship Forum Proceedings

Development, implementation and evaluation of an online module on airway management for pediatricians in training

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The rationale for the project is based on the observation in the literature that the requisite knowledge of pediatric residents regarding airway management is deficient. The content that is required is taught during the PALS (Pediatric Advanced Life Support) course and reinforced throughout the four years of postgraduate training, however, this content is critical and developing a reliable and efficient way to impart this information would be a great addition to the residency program. An online educational module was developed. The online module consists of 5 sections: Section 1-Pre-module Assessment, Section 2-Educational Content on Managing Respiratory emergencies, Section 3-Postmodule Practice Assessment, Section 4-Post-module Assessment, Section 5-Module Evaluation. The educational content in section 2 covers recognition of airway emergencies, oxygen delivery systems, assisted ventilation, Bag-Mask ventilation and endotracheal intubation. Images and videos are used to convey this information. The module was developed using FluidSurveys[©]. FluidSurveys[©] is an online questionnaire tool that is used to build online surveys, forms, polls and quizzes. This tool allowed for quick module development and the ability to build in various types of questions and interactivity in a cost effective manner.

A pilot of the completed module was evaluated with second year medical students during the Introduction to Clerkship course, June, 2011. Of 74 medical students, approximately 25 volunteered to participate. They were randomly assigned to the control (N=12) or intervention group (N=13). Generally, there is a trend that most scores improved in the intervention group following completion of the module. Scores increased or stayed the same in 11 out of 16 questions. Interestingly, scores fell in 5 out of 16 questions. This may be a result of poor question construction or a confusing point in the module. Overall, the module was evaluated very favourably by the students. Eight out of the 13 students who completed the module completed the evaluation. 75% felt the module was at an appropriate level and an appropriate length. 88% felt it was easy to follow. 25% felt it was an efficient use of time. 62% felt it was a good use of time but could be improved. When asked if they would like to do more modules such as this,

50%, agreed with the comment, "Love it" and 50% said they would "do it if they have to".

In summary, an online module of airway management knowledge is effective and acceptable to learners. Future research will determine if the use of this module can better prepare residents for the clinical setting.