Assessment of Tracheostomy and Laryngectomy Knowledge Among Non-otolaryngology Physicians

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ABSTRACT

Objectives: -Assess the current fund of knowledge about alternate airways (tracheostomy and laryngectomy) among practicing physicians and residents of multiple specialties at University of California Davis -Identify knowledge deficits regarding alternate airways -Assess the need for improved medical education about care of alternate airways.

Subjects and Methods: Study Design: Cross-sectional survey Setting: Academic medical center Subjects and Methods: An anonymous 10-item, multiple choice survey was administered to residents, fellows and attending physicians at the University of California, Davis in the departments of Emergency Medicine, Family Medicine, General Surgery, Internal Medicine, Otolaryngology, Pediatrics. Scores from the physicians in the Department of Otolaryngology- Head and Neck Surgery were compared to non-Otolaryngology physician and medical student scores. These data were analyzed using ANOVA and chi squared analysis. An educational lecture was given following the survey. 3 months after the lecture a follow-up survey was administered and pre and post instructional scores were compared.

Results: Otolaryngology physicians scored an average of 98%, while non-otolaryngology physicians scored 57% (P<0.05). Non-otolaryngology surgical residents scored 68% while non-surgical residents were lower at 54% (P=0.0001). Comparing pre-lecture scores to post-lecture scores, all non-otolaryngology physicians improved their scores significantly from 57% to 85% (P<0.005). Non-surgical residents had significant improvement after the instructional lecture; closing the score gap with surgical residents for the post-lecture quiz.

Conclusions: Individuals with alternate airways are common, and their care demands a fundamental understanding of and comfort with their unique provision. Our findings identify significant knowledge gaps among non-otolaryngologists concerning the critical topic of alternate airways. These deficits underscore the importance of improving familiarity with alternate airways among non-otolaryngologists who are likely to encounter such individuals. Through instructional lectures, we have shown that the deficits in knowledge can be identified. Simulation scenarios and continued education with these physician cohorts will assure the proper care of patients with alternate airways.

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Discussion

• Non-otolaryngology physicians had significantly lower scores compared to otolaryngology physicians
• All respondents improved significantly in questions regarding the differences between laryngectomy and tracheostomy
• Before the educational lecture, residents in non-otolaryngology surgical fields performed better than residents in non-surgical specialties. (p<0.05)
• Post-education, there was no significant difference in overall score between surgical and non-surgical residents

Conclusions

Our findings identify significant knowledge gaps among non-otolaryngologists concerning the critical topic of AAAs. These deficits underscore the importance of improving familiarity with AAAs among non-Otolaryngologists who are likely to encounter such individuals. Through instructional lectures, we have shown that the deficits in knowledge can be identified and improved. Simulation scenarios and continued education are plausible future interventions to ensure the proper care of patients with AAAs.