Otolaryngology Education in the University of Calgary Undergraduate Medical Curriculum: A Needs Assessment Study

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INTRODUCTION

The scope of Otolaryngology-Head and Neck Surgery (Oto-HNS) is wide and its representation in primary and tertiary care patient populations is considerable. Despite this, Oto-HNS teaching at the undergraduate medical level can be limited. This potential inadequacy in Oto-HNS teaching can result from a lack of student skill and confidence in performing and interpreting common Oto-HNS exams.

While every undergraduate medical program is working within time and administrative constraints that would make the expansion of any part of the curriculum difficult, even modest increases in Oto-HNS teaching can enhance both student skill and confidence in performing and interpreting common Oto-HNS exams.

To date, there have been no studies performed to assess the current state of Oto-HNS education at the University of Calgary from the students' perspective. In order to improve Oto-HNS education at the undergraduate level, it is important to first understand the needs, in order to develop a more comprehensive and effective curriculum.

OBJECTIVES

1) Determine the amount and type of Oto-HNS teaching medical students at the pre-clerkship stage
2) Assess the confidence expressed by students in managing common Oto-HNS exam conditions, as well as performing common exam maneuvers, are summarized in Figure 1. Confidence was scored on a Likert scale of 0-5, 0 = no confidence and 5 = very confident. On average, first year medical students expressed a confidence of 0.49, 95% confidence interval [0.38, 0.60] in a focused history from patients presenting with common Oto-HNS conditions. The confidence in performing common Oto-HNS physical exams as well as managing common Oto-HNS conditions were 0.81, 95% CI [0.70, 0.92] and 0.69, 95% CI [0.59-0.79], respectively. In comparison, second year medical students expressed a confidence of 2.44, 95% CI [2.35, 2.52] in taking a focused Oto-HNS history, 2.54, 95% CI [2.38, 2.71] in performing physical exam maneuvers, and 2.34, 95% CI [2.28, 2.40] in managing common Oto-HNS conditions. When the stated confidence was compared between the first and second year students for each presentation and physical exam maneuver, there was a consistent and significant increase with the advancing year, ranging from a mean difference of 1.12 to 2.23 (p<0.05 for each presentation and maneuver).

3) Determine the teaching methods that students would find to be of highest educational value.

METHODS

This is a survey based cohort study of first and second year medical students at the University of Calgary, completed in January and February of 2013. The survey was devised based on the Oto-HNS competencies outlined by the national medical board (MCCQE Part I objectives).

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RESULTS

There were 150 responses (response rate of 42.9%). Thirty-eight (74.5%) of first year respondents have had less than 10 hours of Oto-HNS teaching and of these experiences, 19 (50%) were with Family Physicians and only 2 (5%) were with Oto-HNS physicians.

For the second year class, 60 (60.6%) have had less than 10 hours of Oto-HNS teaching, 24 (24.2%) have had between 10-24 hours, and 15 (15.2%) have had greater than 24 hours. Forty-eight (48.5%) of these experiences were with Oto-HNS staff and/or residents and 19 (19.2%) were with Internal Medicine, Family, or Emergency physicians.

Confidence expressed by medical students in approaching and managing common Oto-HNS conditions, as well as performing common exam maneuvers, are summarized in Figure 1. Confidence was scored on a Likert scale of 0-5, 0 = no confidence and 5 = very confident. On average, first year medical students expressed a confidence of 0.49, 95% confidence interval [0.38, 0.60] in taking a focused history from patients presenting with common Oto-HNS conditions. The confidence in performing common Oto-HNS physical exams as well as managing common Oto-HNS conditions were 0.81, 95% CI [0.70, 0.92] and 0.69, 95% CI [0.59, 0.79], respectively. In comparison, second year medical students expressed a confidence of 2.44, 95% CI [2.35, 2.52] in taking a focused Oto-HNS history, 2.54, 95% CI [2.38, 2.71] in performing physical exam maneuvers, and 2.34, 95% CI [2.28, 2.40] in managing common Oto-HNS conditions. When the stated confidence was compared between the first and second year students for each presentation and physical exam maneuver, there was a consistent and significant increase with the advancing year, ranging from a mean difference of 1.12 to 2.23 (p<0.05 for each presentation and maneuver).

3) Determine the teaching methods that students would find to be of highest educational value.

The survey was distributed to medical students in the first and second year, i.e., the pre-clerkship classes. The timing was chosen such that second year students are surveyed immediately prior to starting their clinical clerkship rotations, to fully capture their pre-practicum education. Distribution of the survey was performed in the classroom either before or after a lecture to ensure a higher response rate.

Non-parametric statistics were used to summarize most study findings. An independent-samples t-test was used to determine whether any significant differences exist in confidence expressed by the first and second years, as a method to gauge the effectiveness of pre-clerkship Oto-HNS teaching.

REFERENCES