

Trends in Otolaryngology Medical School Curriculum: Do They Correlate with Residency Application Rates?

Elizabeth F. Boscoe BA, Cristina E. Cabrera-Muffly MD FACS
University of Colorado, Aurora, Colorado

ABSTRACT

Objectives

- 1) To identify trends in medical school otolaryngology curriculum requirements
- 2) To determine whether the otolaryngology curriculum correlates with application rates to otolaryngology residency programs

Methods

Allopathic medical schools were surveyed to determine their otolaryngology curriculum requirements. Public databases and an existing otolaryngology resident database were used to determine application rates to otolaryngology residency programs from 2011 to 2013.

Results

60% of schools responded. Average class size was 149 students. 68% of schools noted that 75-100% of their students received pre-clinical exposure to otolaryngology, with 59% reporting a mandatory preclinical module. 89% of schools offered otolaryngology as a clinical elective. 7% of schools required a mandatory otolaryngology clinical rotation. Neither schools with mandatory pre-clinical otolaryngology modules or mandatory clinical rotations had a higher rate of otolaryngology residency applications. Medical schools with larger class size ($p < 0.0001$) or an affiliated otolaryngology residency program had a higher rate of resident applicants ($p < 0.0001$).

Conclusions

Increased exposure to otolaryngology curriculum does not increase residency applications. Medical students do not receive significant exposure to otolaryngology during medical school. Increased requirements for otolaryngology curriculum may be beneficial to all medical students regardless of their specialty choice.

CONTACT

Cristina Cabrera-Muffly, M.D.
University of Colorado
Department of Otolaryngology
cristina.cabrera-muffly@ucdenver.edu

INTRODUCTION

Since most exposure to medical specialties begins in medical school, we sought to determine how much exposure medical students currently receive within otolaryngology. It has been established that undergraduate medical school education curriculum varies widely.¹ There has also been a significant increase in both the number of US allopathic medical schools and their class sizes.²

We hypothesized that the larger number of medical students and increasing medical knowledge demands in many different specialties, decrease the amount of otolaryngology specific exposure among students, and that variability of exposure is still an issue within undergraduate medical education. In addition, we wished to determine whether there was a correlation between the amount of otolaryngology exposure students receive and application rates to otolaryngology residency.

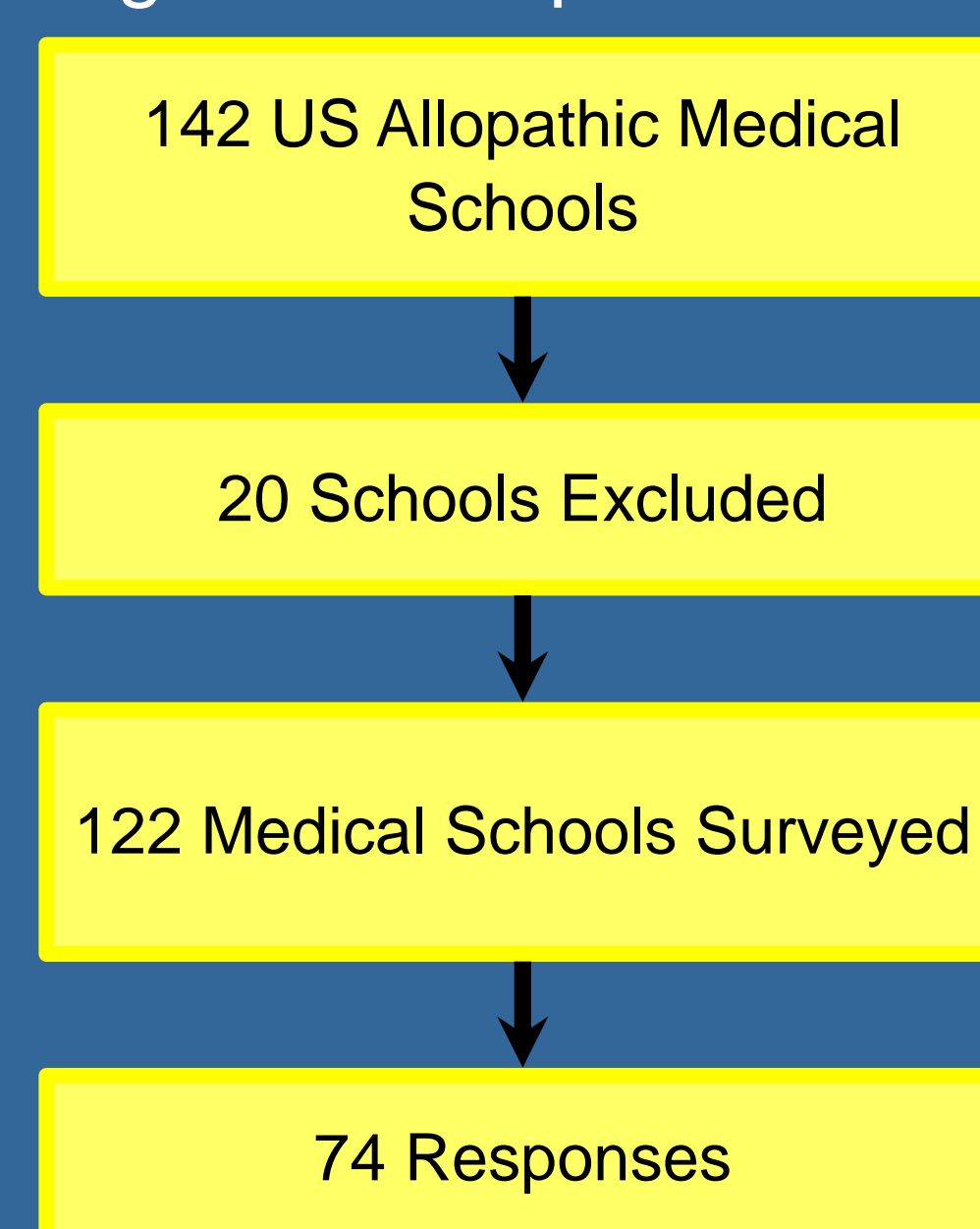
METHODS

Approval for this study was obtained from the Colorado Multiple Institution Review Board.

A 13 question web-based survey was administered to 122 US allopathic medical schools. Publically available data from the NRMP, otolaryngology residency program website data, and medical school website data were cross referenced with a previously collected database of applicants to our institution's otolaryngology residency program to create a master database of applicants from each medical school.

Statistical analysis was performed using JMP 11.0 software. Univariate analysis was performed with a p-value of 0.05 determined as significant.

Figure 1: Respondents



RESULTS

Respondents

- 60% of the 122 schools responded.
- Mean class size reported was 149 students

Pre-clinical Years

- 68% reported that 75-100% of students had exposure to otolaryngology.
- 8% reported students had no exposure to otolaryngology.
- 59% reported a required preclinical otolaryngology module.
- 31% reported no preclinical module was required.

Table 1: Pre-clinical exposure types

Type of exposure	N	%
Head and neck physical exam	50	68%
Otolaryngology lecture	38	51%
Observe otolaryngologist in clinic	26	35%
Otolaryngology small group	20	27%
None	7	9%

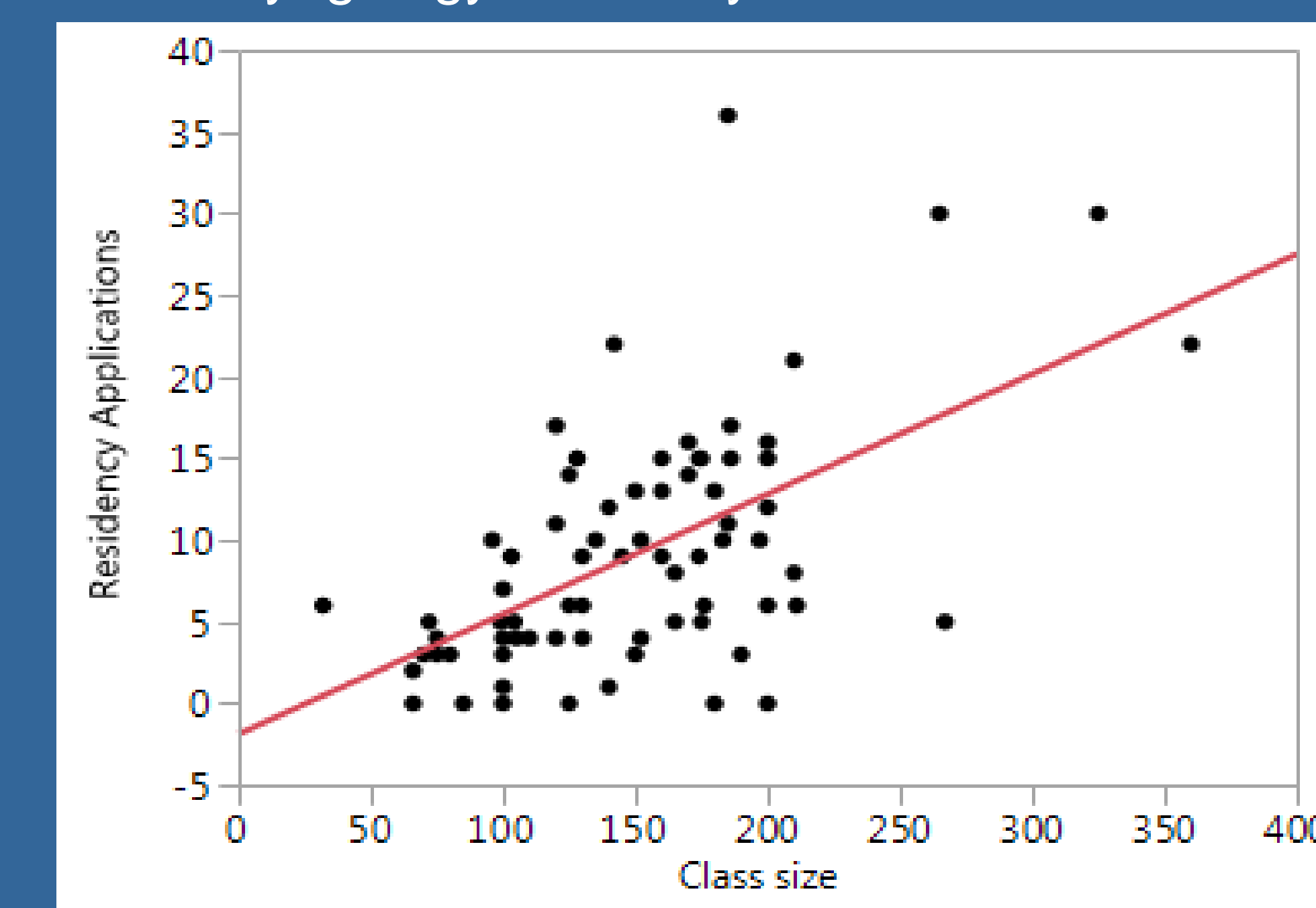
Clinical Years

- 89% reported otolaryngology offered as a clinical elective.
- 7% reported a mandatory clinical rotation.
- 6% do not offer an otolaryngology rotation.
- Among schools offering a clinical rotation, 89% reported that the rotation lasted 2-4 weeks.
- A mean of 12 students a year (9% of the mean class size) participated in clinical elective or sub-internship otolaryngology rotations.

Residency Applications for 2011-2013

- 70 schools responded to residency application specific questions.
- Mean of 3 otolaryngology residency applicants per year reported at each school
- Actual numbers of applicants from these 70 medical schools were identified via our pre-existing database.
- Schools with larger class sizes had more applicants per year.
- Medical schools with an affiliated otolaryngology residency program had significantly higher number of applicants than medical schools without an affiliated otolaryngology residency program ($p < 0.001$).
- No correlation between a mandatory otolaryngology pre-clinical module or clinical rotation and application rates

Figure 2: Class size versus number of applicants to otolaryngology residency.



DISCUSSION

Most students in medical school receive some amount of otolaryngology exposure in their pre-clinical years, but most clinical exposure to the field is elective. Of the schools that noted they had a mandatory preclinical otolaryngology module, this experience was quite variable. It is highly likely that there is significant variability between schools both in quality of instruction and in content.

Only class size and affiliation of an otolaryngology residency program were associated with increased numbers of residency applications. Amount of pre-clinical and clinical exposure to otolaryngology was not associated with application rates to residency.

CONCLUSIONS

Medical students receive limited exposure to otolaryngology in both pre-clinical and clinical curriculum. Although the amount of exposure to otolaryngology is not correlated with application rates to otolaryngology residency, this should not be used to justify a lack of otolaryngology curriculum. Regardless of which medical specialty they pursue, physicians will be called upon to manage head and neck symptoms throughout their clinical practice. Increased and standardized requirements for otolaryngology content will be beneficial to all medical students.

REFERENCES

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2. Iglehart JK. "The Residency Mismatch." *The New England Journal of Medicine*. 2013 Jul 25;369(4):297-9.