

Otolaryngology-Head and Neck Surgery Boot Camp in Preclinical Undergraduate Medical Education: A Pilot Study

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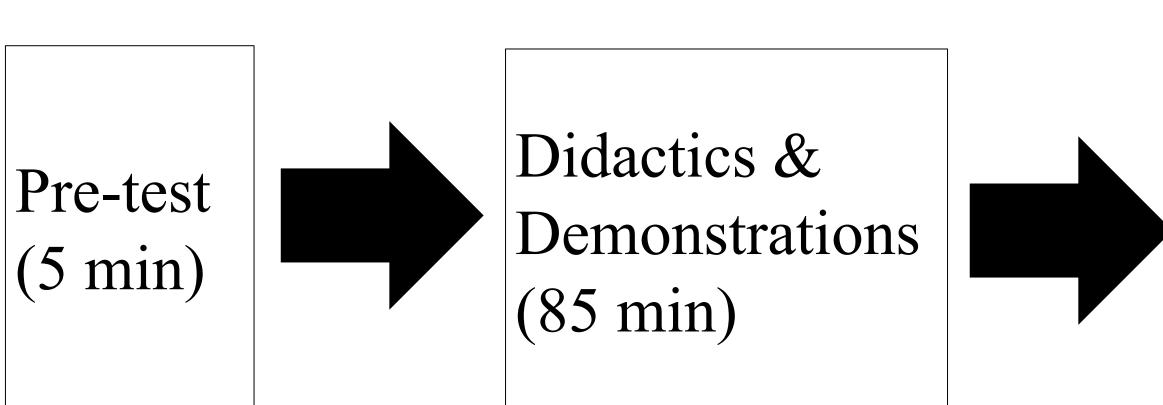
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Introduction

- There are limited opportunities in the medical school curriculum to learn about the field of otolaryngology (ORL) and to acquire relevant clinical skills, especially during preclinical years¹⁻³
- About 50% of pediatric patients and 20% of adult patients seeing a general practitioner report an ORL complaint^{4,5}
- It is essential for all medical students to learn about common ORL problems and associated management regardless of their intended future specialty
- Objective: To investigate the impact of implementing an Otolaryngology-Head and Neck Surgery boot camp in preclinical medical education to help firstand second-year medical students learn about common ORL problems and become more comfortable performing basic ORL clinical skills so that they are better prepared to provide care for patients during clerkships and beyond

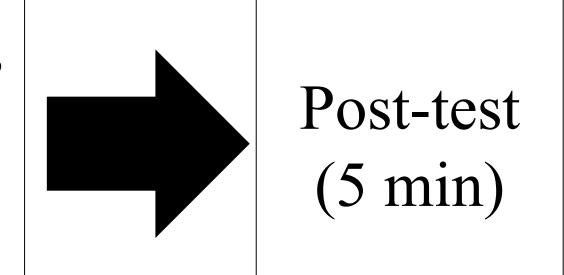
Methods

Study Population: First- and second-year medical students



Practice clinical skills in small groups under guidance of attendings, residents, and senior medical students

 Complete Head and Neck Physical Exam (85 min)

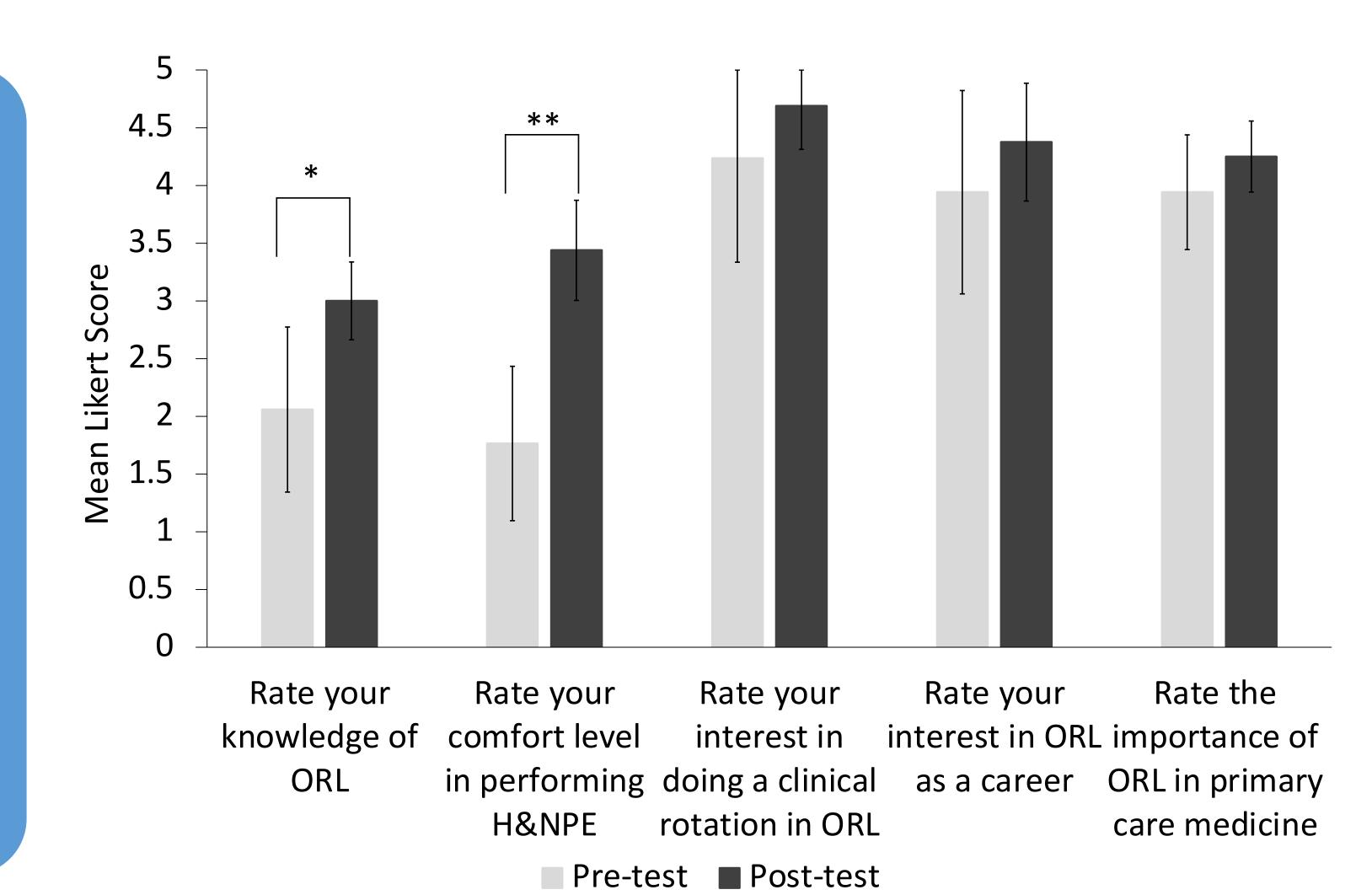


Discussion

- Currently, ORL teaching for preclinical medical students is typically in the form of anatomy lab and basic science lectures, without a focus on diagnosis and management of ORL pathologies
- ORL clinical skills are not emphasized
- Studies performed at United States medical schools over the past 20 years have consistently demonstrated underrepresentation of ORL in preclinical medical school curricula, resulting in variable and limited exposure for students^{1-3,6}
- Opportunities to learn about ORL in depth are provided to students in their clinical years, primarily through 3rd year electives and 4th year sub-internships
- Our boot camp bridges the gap for preclinical medical students
- Limitations include small sample size and subjects biased towards those who were already interested in ORL

Results

A total of 17 students participated in the boot camp. 17 students completed pretests and 16 completed postests. Ratings of self-reported knowledge of ORL (2.06 vs. 3.00; p=0.019) and comfort level in performing H&NPE (1.76 vs. 3.44; p<0.001) significantly increased after the boot camp. Mean performance on an ORL content exam also significantly increased from 42.17% to 71.35% (p<0.001).



Conclusions and Future Directions

- An ORL boot camp can be an effective method of teaching for preclinical medical students
- Further studies including larger, more diverse cohorts are warranted

References

- . Boscoe EF, Cabrera-Muffly C. Otolaryngology in the medical school curriculum: Current trends in the United States. *Laryngoscope*. Feb 2017;127(2):346-348. doi:10.1002/lary.26099
- . Ryll LS, Pellegrini WR, Richards PQ, Zhou MT, Newlands SD, Levi JR. A Cross-Sectional Survey Study Evaluating United States Medical School Curricula in Otolaryngology. *Ann Otol Rhinol Laryngol*. Apr 3 2023:34894231164220. doi:10.1177/00034894231164220
- 3. Fung K. Otolaryngology--head and neck surgery in undergraduate medical education: advances and innovations. *Laryngoscope*. Feb 2015;125 Suppl 2:S1-14. doi:10.1002/lary.24875
- 4. Hu A, Sardesai MG, Meyer TK. A need for otolaryngology education among primary care providers. *Med Educ Online*. 2012;17:17350. doi:10.3402/meo.v17i0.17350
- 5. Wu EC, Passy V, Armstrong WB. Preliminary evaluation of junior medical students' exposure and comfort with performing the basic head and neck examination. *Laryngoscope*. Jul
- 2011;121(7):1431-5. doi:10.1002/lary.21835
 6. Haddad J, Jr., Shah J, Takoudes TG. A survey of US medical education in otolaryngology. *Arch Otolaryngol Head Neck Surg*. Nov 2003;129(11):1166-9. doi:10.1001/archotol.129.11.1166