

# Virtual Away Rotations and Residency Applicant Outcomes in Otolaryngology



Nicholas R Lenze, MD, MPH<sup>1</sup>; William J Benjamin, MPH<sup>1</sup>; Lauren A Bohm, MD<sup>1</sup>; Marc C Thorne, MD, MPH<sup>1</sup>; Angela P Mihalic, MD<sup>2</sup>; Robbi A Kupfer, MD<sup>1</sup>

<sup>1</sup>University of Michigan Department of Otolaryngology

<sup>2</sup>UT Southwestern Medical Center Department of Pediatrics

#### Introduction

- Away rotations have historically been important in the otolaryngology match but on average cost \$2437 per applicant over a given application cycle.<sup>1</sup>
- Virtual away rotations were a novel innovation during the 2020-2021 application cycle and may provide a more equitable alternative to traditional in-person away rotations.<sup>2,3,4</sup>
- To our knowledge, no studies have examined the impact of virtual away rotations on otolaryngology interview and match outcomes.

# Methods

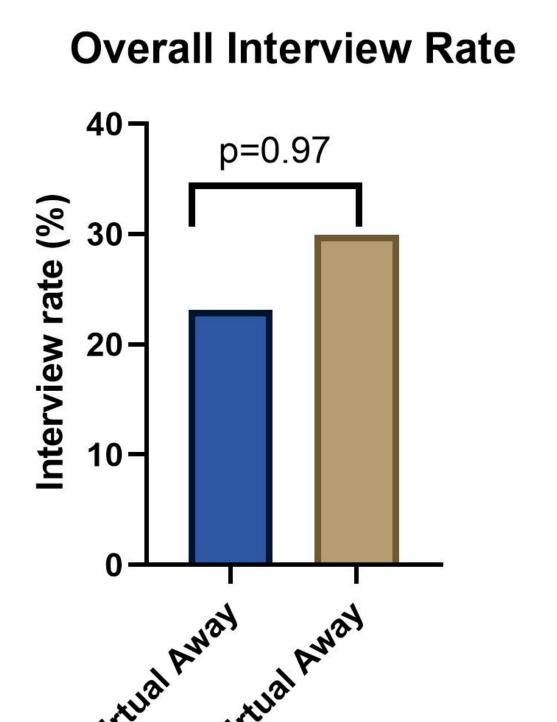
Otolaryngology applicants during the 2020-2021 cycle who responded to the Texas Seeking Transparency in Application to Residency (STAR) survey were identified. The primary outcome was mean number of interview offers. Chi square tests, two-sided t-tests, logistic regression models, and ordinary least squares regression models were used to examine associations with virtual away rotations.

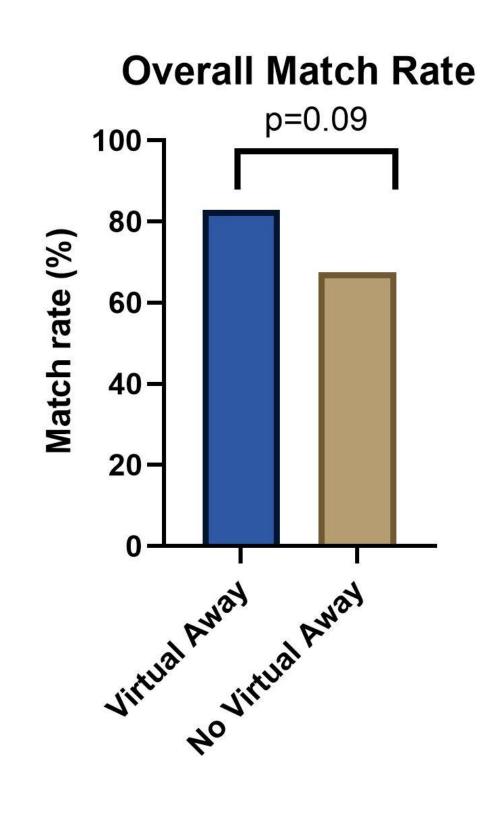
**Table 1. Applicant Characteristics** 

	Virtual Away	No Virtual Away	
Variable	N=35	N=80	p-value
AΩA – no. (%)			0.77
No	18 (51.4)	38 (47.5)	
Yes	13 (37.1)	35 (43.8)	
No chapter	4 (11.4)	7 (8.8)	
GHHS – no. (%)			0.52
No	25 (71.4)	62 (77.5)	
Yes	5 (14.3)	12 (15.0)	
No chapter	5 (14.3)	6 (7.5)	
Honors in specialty applied to – no.			0.11
(%)			
No	2 (6.7)	0 (0.0)	
Yes	28 (93.3)	59 (100.0)	
Number of clerkship honors – mean	4.5 (2.4)	4.0 (2.4)	0.26
(SD)			
Cumulative quartile – no. (%)			0.08
1 <sup>st</sup>	14 (58.3)	46 (74.2)	
2 <sup>nd</sup>	8 (33.3)	7 (11.3)	
3 <sup>rd</sup>	1 (4.2)	7 (11.3)	
4 <sup>th</sup>	1 (4.2)	2 (3.2)	
Step 1 – mean (SD)	249.5 (11.5)	247.3 (11.4)	0.46
Step 2 – mean (SD)	256.6 (9.9)	256.0 (10.0)	0.83
Abstracts, Posters, and Presentations-	8.6 (3.1)	7.7 (3.6)	0.28
mean (SD)			
Publications – mean (SD)	6.1 (3.3)	4.8 (3.3)	0.06
Research Experiences – mean (SD)	6.7 (2.3)	6.5 (2.8)	0.45
Volunteer experiences – mean (SD)	8.0 (2.7)	7.3 (2.7)	0.22
Leadership Positions – mean (SD)	5.7 (3.2)	5.0 (2.8)	0.24
Couples match – no. (%)			0.49
No	31 (88.6)	74 (92.5)	
Yes	4 (11.3)	6 (7.5)	
Research year – no. (%)			0.39
No	27 (77.1)	67 (83.8)	
Yes	8 (22.9)	13 (16.3)	

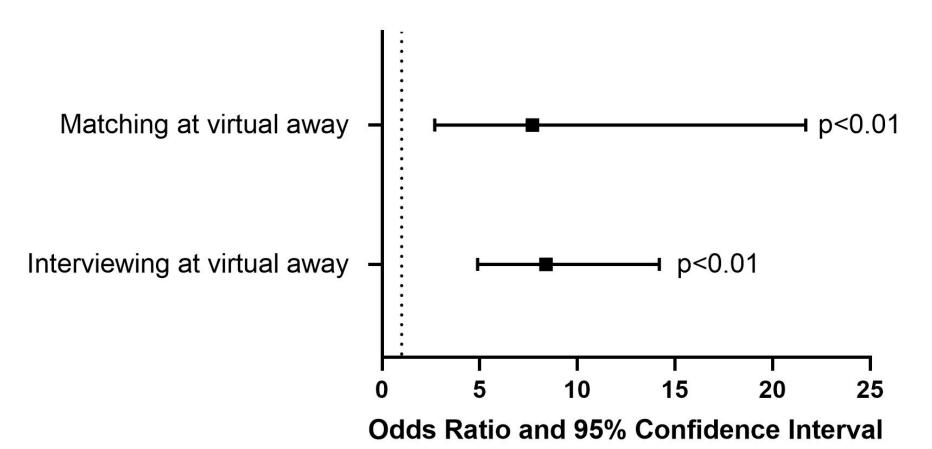
#### Results

- N=115 otolaryngology applicants
- 35 applicants (30.4%) completed at least one virtual away rotation
- 68.6% interviewed at a program where they completed a virtual away
- 11.4% matched at a program where they completed a virtual away rotation.
- Mean number of interview offers was 14.9 for applicants who had completed a virtual away vs 11.6 for applicants without a virtual away (p=0.03)
- Each additional virtual away rotation was associated with approximately 2 additional interview offers (beta-coefficient 2.29 [95% CI 0.8-3.7; p<0.01]).</li>
- Mean overall interview rate (all applicants) was 27.8%
   For applicants completing a virtual away: 23.1%
   For applicants not completing virtual away: 29.9%
- Mean overall match rate (all applicants) was 72.2%
   For applicants completing a virtual away: 82.9%
   For applicants not completing virtual away: 67.5%
- Applicants who completed a virtual away rotation were more likely to receive an interview from that program (OR 8.4, 95% CI 4.9 to 14.2; p<0.01) and to match there (OR 7.7, 95% CI 2.7 to 21.7; p<0.01)</li>





#### **Program Specific Outcomes**



# **Conclusions**

Virtual away rotations appear to significantly improve an applicant's chances of interviewing and matching at that program and are associated with a higher number of total interview offers.

# **Contact**

Nicholas R. Lenze, MD, MPH
Resident Physician
Department of Otolaryngology/Head & Neck Surgery
University of Michigan
nlenzemed@gmail.com

### References

- 1. Lenze NR, Mihalic AP, Kovatch KJ, Thorne MC, Kupfer RA. Impact of the COVID-19 Pandemic on the 2021 Otolaryngology Residency Match: Analysis of the Texas STAR Database. *Laryngoscope*. Published online September 13, 2021. doi:10.1002/lary.29860
- 2. Wilson LT, Milliken L, Cagande C, Stewart C. Responding to Recommended Changes to the 2020-2021 Residency Recruitment Process From a Diversity, Equity, and Inclusion Perspective. *Acad Med.* 2022;97(5):635-642. doi:10.1097/ACM.0000000000004361
- doi:10.1097/ACM.0000000000004361

  3. Asaad M, Glassman GE, Allam O. Virtual Rotations During COVID-19: An Opportunity for Enhancing Diversity. *J Surg Res*.
- 2021;260:516-519. doi:10.1016/j.jss.2020.11.071
  4. Landeen KC, Esianor B, Stevens MN, et al. Online Otolaryngology: A Comprehensive Model for Medical Student Engagement in the Virtual Era and Beyond. *Ear Nose Throat J.* Published online July 5, 2021:1455613211029748.
  doi:10.1177/01455613211029748