# Otolaryngology Match Trends in the Era of High-Volume Preference Signaling

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Introduction

- Otolaryngology was among the first specialties to adopt preference signaling in the NRMP.
- Number of signals increased from 7 in 2023 to 25 in 2024 and remained at 25 in 2025. (Figure 1). (1)
- Early data (2023–2024) showed fewer applications without loss of interviews or match success. (2)
- The broader impact of sustained high-volume signaling remains unclear especially when it comes to impact on characteristics of applicants who match
- Texas Seeking Transparency in Applications to Residency (Texas STAR) is a nationwide database of survey results distributed to graduating 4th year medical students every year.
- **Objective:** Evaluate trends in match outcomes, applications, and applicant characteristics from **2022–2025.**
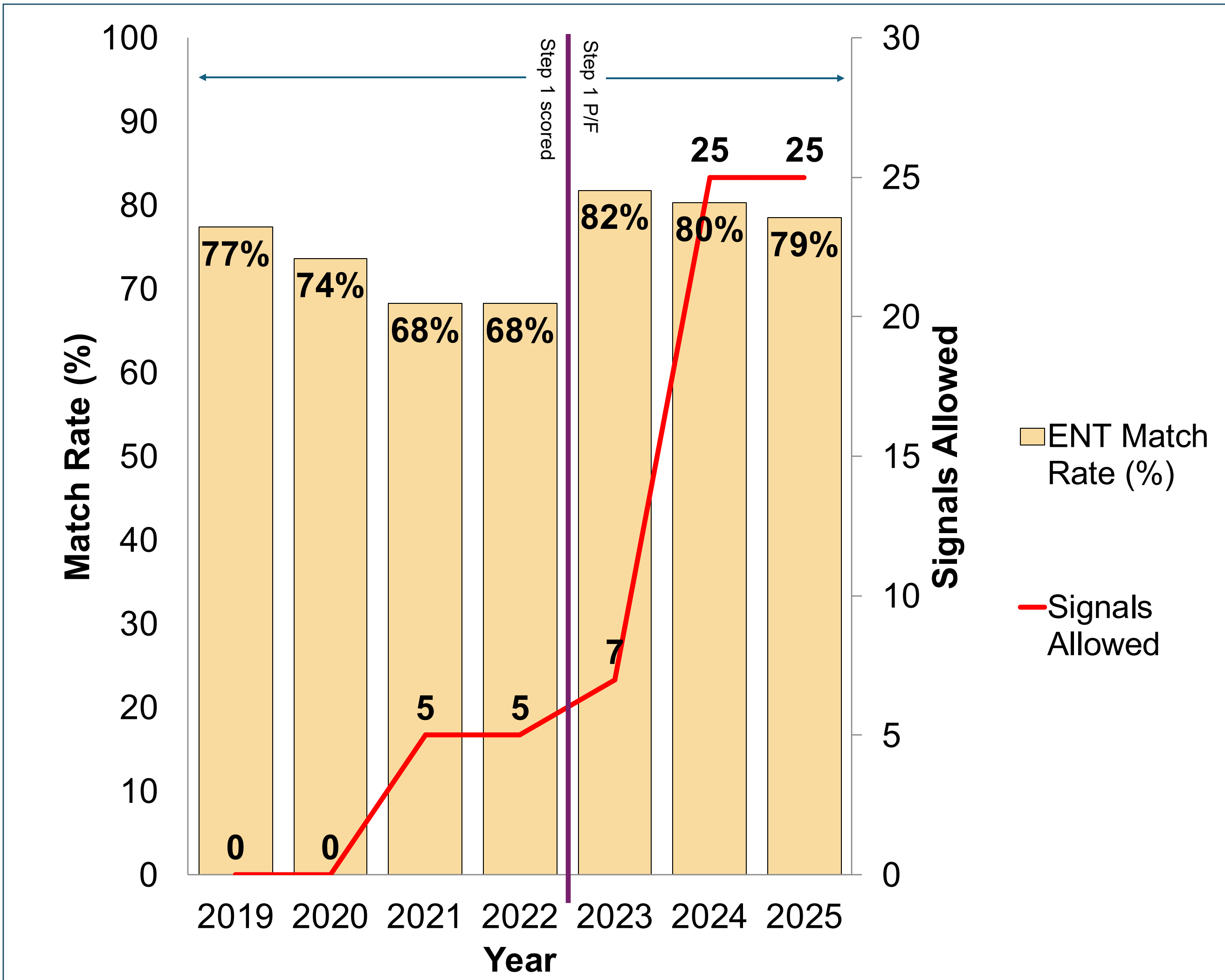
Figure 1. NRMP Reported US M.D. Senior ENT Match Rate vs. Number of Available Preference Signals (3, 4)

Methods

- Texas STAR database was used to collect data from graduating 4th-year medical students between 2022 and 2025
- Survey respondents were split into low-volume signaling (2022 & 2023) and high-volume signaling (2024 & 2025).
- Applicant match outcomes and characteristics were collected including match rate, number of applications submitted, and number of interviews received. Additional variables included Step 2 CK score, class quartile, number of clerkship honors, AOA membership, GHHS membership, medical degree type, additional degrees, completion of a research year, leadership roles, volunteer experience, number of publications, and total abstracts, posters, and publications (A/P/P)
- Statistical analysis was performed using SPSS statistical software
  - Matched applicant characteristics were compared unmatched applicant characteristics in both the low and high volume signal groups
  - Characteristics of matched applicants only were then compared between the low and high volume signal groups
  - Student's two-tailed t-test was used to investigate relationships between continuous variables. Chi-squared test of independence was used to investigate relationship between categorical variables.
  - Continuous data is reported as the mean (standard deviation). Categorical data is reported as the percentage frequency.

Results

- There were a total of 553 respondents over four years.
- The low volume signaling group (2022 & 2023 applicants) contained 283 respondents
- The high volume signaling group (2024 & 2025 applicants) contained 270 respondents
- There was no significant difference between the two groups in the match rate or the number of interviews each applicant received (Table 1).
- In the low volume group, those who went unmatched had significantly lower Step 2 scores, as well as fewer publications and Abstracts, Posters, Publications (A/P/P) (Table 1).
- In the high-volume group, those who went unmatched had significantly lower Step 2 scores, fewer A/P/P, and fewer interviews (Table 1).
- Among matched applicants, there was a significant decrease in the number of applications and publications, while there was a significant increase in step 2 score and A/P/Ps (Table 2).

Table 1. Comparison of matched and unmatched applicants within low-volume and high-volume application cycles

	Low Volume	(n=283)	P	High Volume	(n=270)	P
Match Outcome (Yes/Total, %)	226/283 (79.9%)			232/270 (85.9%)		0.059
Step 2 Score	256.36 (9.61)	249.79 (10.93)	<0.001	259.39 (8.43)	252.64 (13.29)	<0.001
Quartile			0.001			0.001
1st	69.70%	42.86%		62.67%	33.33%	
2nd	23.24%	28.57%		26.00%	28.57%	
3rd	5.63%	25.71%		10.67%	28.57%	
4th	1.41%	2.86%		0.67%	9.52%	
Clerkship Honors	3.69 (2.60)	3.51 (2.28)	0.595	4.82 (2.11)	3.33 (2.04)	<0.001
GHHS	15.90%	19.61%	0.329	20.75%	12.12%	0.245
AOA	54.36%	39.13%	0.063	60.23%	36.00%	0.022
Degree (MD)	96.02%	96.49%	0.613	97.41%	94.74%	0.313
2nd Degree	17.26%	36.84%	0.001	24.77%	14.29%	0.406
Research Year	23.00%	26.32%	0.600	26.72%	31.58%	0.534
Publications	6.47 (3.75)	5.30 (3.93)	0.049	5.00 (3.90)	4.24 (3.72)	0.252
A/P/P	9.35 (3.39)	8.20 (3.72)	0.039	10.08 (3.01)	8.61 (3.70)	0.007
Applications	84.50 (24.36)	84.63 (24.58)	0.973	51.77 (23.07)	47.21 (24.64)	0.292
Interviews	15.11 (8.30)	9.89 (8.94)	<0.001	14.83 (5.34)	9.45 (4.82)	<0.001

Table 2. Comparison of matched applicants between low-volume and high-volume application cycles

	Low Volume	High Volume	P
Step 2 Score	256.36 (9.61)	259.39 (8.43)	<0.001
Quartile			0.332
1st	86.80%	93.10%	
2nd	76.70%	86.70%	
3rd	47.10%	72.70%	
4th	66.70%	33.30%	
Clerkship Honors	3.69 (2.60)	4.82 (2.11)	<0.001
GHHS	15.90%	20.80%	0.205
AOA	54.40%	60.20%	0.257
Degree (MD)	96.00%	97.41%	0.442
2nd Degree	17.26%	30.37%	0.414
Research Year	23.00%	26.72%	0.358
Publications	6.47 (3.75)	5.00 (3.90)	<0.001
A/P/P	9.35 (3.39)	10.08 (3.01)	0.015
Applications	84.50 (24.36)	51.77 (23.07)	<0.001
Interviews	15.11 (8.30)	14.83 (5.34)	0.668

Discussion

In recent years, there has been a shift from low-volume to high-volume In recent years, there has been a shift from low-volume to high-volume preference signaling within the otolaryngology match, coinciding with broader changes such as the transition of Step 1 to pass/fail. Prior research has shown that expanded signaling reduces the overall application burden without negatively affecting match outcomes (3).

Our study confirmed stable match and interview rates between low- and high-volume signaling cycles, suggesting that efficiency has not come at the expense of applicant success. When examining applicants within the low- and high-volume groups (Table 1), we found that the number of applications per applicant significantly decreased.

Among matched applicants (Table 2), we observed significant increases in Step 2 CK scores, clerkship honors, and A/P/P, along with a decrease in publications. These findings suggest a shifting applicant profile to one that reflects competitiveness across multiple domains rather than reliance on a single metric. That is, selection appears to be moving toward a more holistic review emphasizing clinical performance and scholarly engagement alongside standardized testing.

Our study is limited by its survey-based design, which is subject to response bias and variable participation. Additionally, because the majority of applicants in Texas STAR ultimately matched, the small unmatched sample size limited our ability to perform multivariate analyses, restricting us to univariate comparisons.

Future directions include collecting additional data in subsequent match cycles to better assess the durability of these observed trends and to more definitively evaluate whether preference signaling is reshaping the selection process or simply mirroring broader applicant competitiveness.

Conclusion

- Preference signaling reduced application volume while maintaining interviews and match rates, indicating greater efficiency in the match process.
- Matched applicants demonstrated higher clerkship honors and research productivity, suggesting a shift toward more holistic selection criteria that emphasize clinical performance and scholarly engagement alongside standardized testing.

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