Trends in Pursuit of Otolaryngology Subspecialty Fellowship

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Abstract

Objectives: 1) Examine resident interest in otolaryngology subspecialty fellowship and the factors which affect interest during the course of residency , **2)** Examine changes in fellowship availability and match rate over time.

Methods: Data regarding fellowship interest and factors that influence fellowship choice including demographics were extracted from the 2008-2014 Section for Residents and Fellows annual survey and analyzed. Historic fellowship match data was available through match resources for Pediatric Otolaryngology, Facial Plastic Surgery, Rhinology and Neurotology and collected for analysis.

Results: Over six years, a total of 2024 residents and fellows responded to the survey. A statistically significant decrease in fellowship interest was seen between junior and senior residents, with 83%, 73%, and 64% of PGY-1, PGY-2&3, and PGY-4&5 residents, respectively, planning to pursue subspecialty training ($p<0.05$). Of the portion planning fellowship training, choice of the subspecialty did not change significantly throughout residency. Over the past four years, interest in fellowships has steadily increased. The most important factors in choosing a subspecialty were consistently type of surgical cases and nature of clinical problems. The number of fellowship positions in Facial Plastic Surgery, Pediatric Otolaryngology and Rhinology have increased over the past decade.

Conclusions: Interest in fellowship continues to be high, but desire to pursue fellowship training decreases with increased residency training. This decision is multivariate in nature. While most subspecialties have grown slowly over time, match rate continues to be highly variable due to fluctuations in application numbers.

Introduction

Each year the American Academy of Otolaryngology - Head and Neck Surgery (AAO-HNS) Section for Residents and Fellows (SRF) conducts a survey sent to all resident members of the academy. A broad range of questions including demographics, questions about current residency program and questions about future plans are asked.

Residents are often interested in how their own experience and future plans compare to other residents across the country. Similarly, residency and Fellowship program leadership may wonder how their program compares to others in the country.

We have chosen to investigate our data regarding otolaryngology subspecialty fellowship pursuit, questioning both changes over time as well as factors that influence fellowship decisions.

Materials and Methods

The survey is conducted annually using an online, electronic resource (surveymonkey.com). The survey is emailed to all resident members of AAO-HNS. Results are anonymous. Each resident can complete the survey once per year. The number of questions varies each year. The survey has been conducted annually, but individual responses were only available since 2008. Survey data used included all responses from 2008 to 2014. In some instances, survey questions were not asked all of these years; this is noted for these results. All possible responses are shown in the figures depicting results from a survey question.

Statistical analysis was performed where noted using Chi-squared analysis. A p value <0.05 denotes statistical significance.

Results

From 2008-2014, there were 2024 respondents to the survey. Broken down by year, in 2008: 412 responses; 2009: 139 responses; 2010: 396 responses; 2011: 347 responses; 2012: 336 responses; 2013: 329 responses; 2014: 460 responses.

A major finding in this study is a decrease in fellowship interest throughout residency. 80% of interns plan to purse a fellowship, 73% of PGY2&3 residents and 64% of PGY 4&5 residents. The reason for this decrease was not able to be determined from the current data. Univariate statistical analysis found that residents with <$100,000 in educational debt were more likely to be interested in pursing fellowship than those with $100,001 - $200,000 debt. (OR 3.2, CI 2.7-3.7 v OR 2.2, CI 1.9-2.5), There was no significant difference with regard to gender or residency program location and interest in fellowship.

Limited data was available regarding fellowship positions and match statistics over time. The four subspecialties participating in the San Francisco match had data available from the San Francisco match website. These results are shown in Figures 11 and 12.

Figure 1:
Distribution of respondents by year of training.
PGY: post graduate year

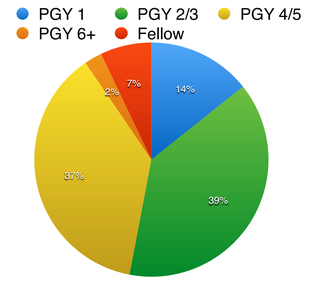


Figure 2:
Distribution of respondents by location of training.
No significant difference was found between training location and fellowship interest.

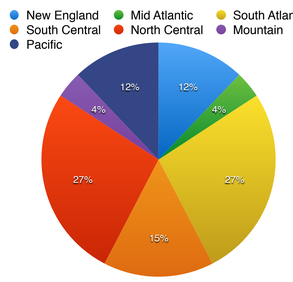


Figure 3:
Distribution of respondents by gender. Statistical analysis found no difference in gender between those interested, not interested and matched into fellowships

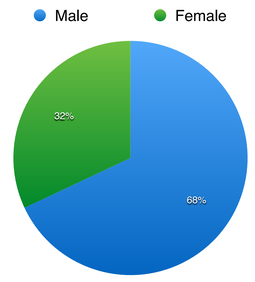


Figure 4:
Distribution of respondents by educational debt in thousands (k). Statistical analysis did find a significant significant decrease in fellowship interest between those with less than $100,000 debt and those with $100,000 - $200,000 debt.

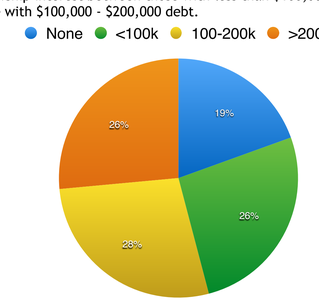


Figure 5:
Most important factor that influences choice of future practice

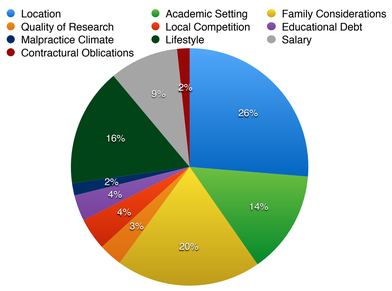


Figure 6:
Reason for selecting a chosen subspecialty
*note: only respondents indicating interest in pursing fellowship, those matched into a fellowship and current fellows included.

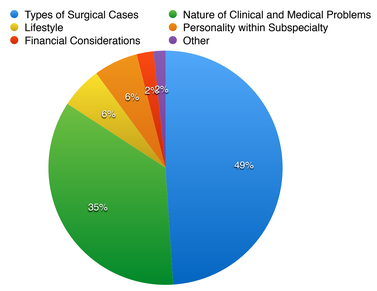


Figure 7:
Percent of residents interested in pursing fellowship training by year of residency training.
Chi-squared alaysis shows a significant ($p<0.05$) difference between each group
*PGY: Post Graduate Year

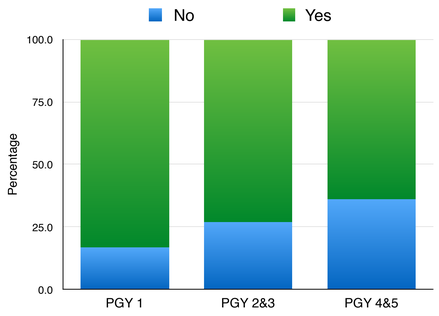


Figure 8:
Respondents plans for future practice type shown for each survey year

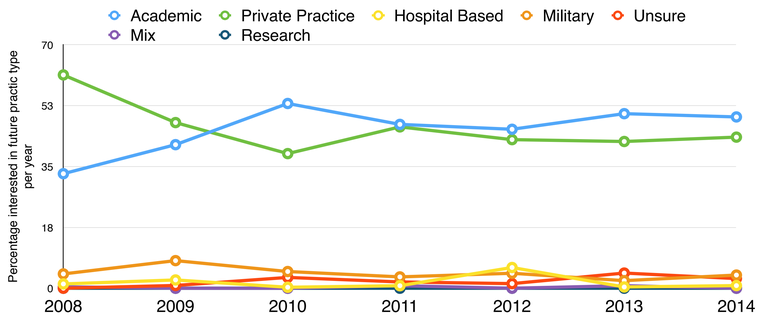


Figure 9:
Respondents interest in fellowship training shown for each survey year. Respondents replied either not interested in fellowship ("No"), interested in fellowship training ("Yes") or already matched into a fellowship program ("Matched"). Note: Showing only resident responses; current fellows were excluded from these results

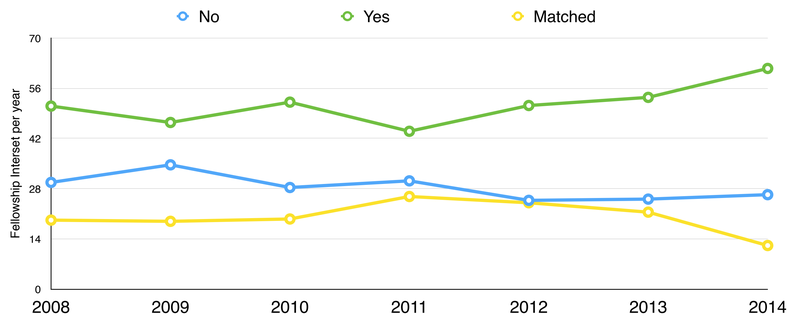
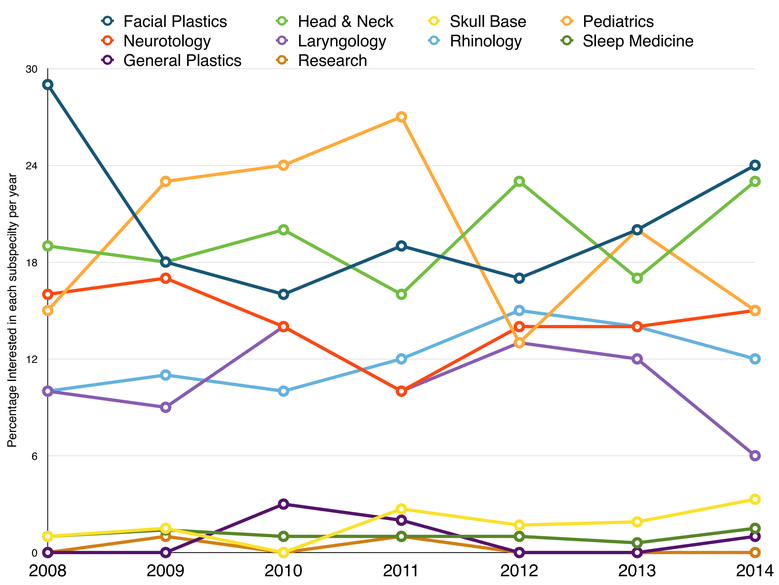
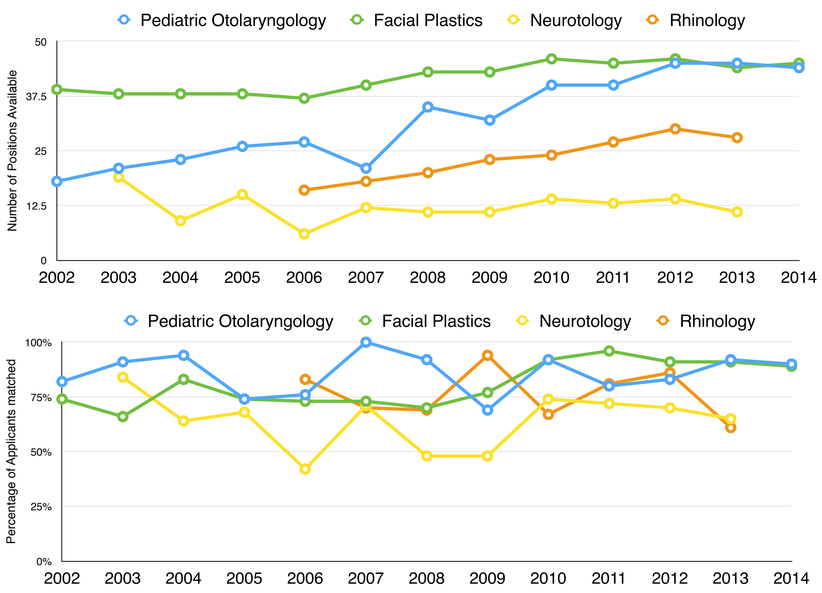


Figure 10:
Reason for selecting a chosen subspecialty. *note: only respondents indicating interest in pursing fellowship and those matched into a fellowship included; current fellows excluded from this analysis



Figures 11 (top) and 12 (bottom):
Data available for four of the otolaryngology subspecialties through the San Francisco Match Program. Figure 11 shows the number of positions offered each year since 2002 and Figure 12 shows the match rate for applicants who applied and submitted a rank list.



Discussion and Conclusions

The results of this analysis are useful for both residents and program leadership in evaluating patterns in resident demographics and resident plans. Unfortunately, not every resident responds to the survey; however, with an open invitation for all residents to participate and a high response rate, we feel this data represents an unbiased sample.

The interest in fellowship training has increased between 2008 and 2014, particularly over the past 4 years. While educational debt was shown to have a possible influence on interest in fellowship, no other factors from the available survey data were significant.

Many questions remain unanswered and lend themselves to further research. What has caused the increase interest in fellowship training since 2008? What leads to decreased interest in fellowship during the course of residency? The SRF will continue to collect survey data to attempt to answer these questions.

References

1. Rosenberg TL, Kelley K, Dowdall JR, Replogle WH, Liu JC, Raol NP, Zafereo ME. Section for residents and fellows-in-training survey results. Otolaryngol Head Neck Surg. 2013 Apr;148(4):582-8.
2. Golub JS, Ossoff RH, Johns MM 3rd. Fellowship and career path preferences in Residents of otolaryngology-head and neck surgery. Laryngoscope. 2011 Apr;121(4): 882-7.
3. San Francisco Match website accessed on 9/1/2014. https://www.sfmatch.org/Specialty.aspx