The Value of Gold and Silver Signals and their Correlation with Step Scores on OBGYN Interview Offers

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Abstract

Competition for residency positions has led to application inflation. In the 2022-23 cycle, 16 residency specialties allowed applications to be submitted with a virtual "token" - signaling a preferred interest in a program. OBGYN was the only program using a two-tiered system that allowed applicants to assign signals using "gold" to indicate highest interest and "silver" indicating very high interest. We examined the impact of the tiered signals on interview offer trends of senior students pursuing OBGYN at a large allopathic medical school and if the interview rate was correlated with their USMLE step scores. A cross-sectional, anonymous survey included the number of interviews obtained from applications submitted using gold signals (3), silver signals (15), and no signal (no cap). Fifteen students identified as participating in the OBGYN match with 100% participation, ten of whom were from regional campuses (67%). The mean interview rate differed based on signaling, showing increased likelihood of interview offers based on signal type. Step 1 and step 2 quartile rank were not associated with signal interview rate. This study supports the use of tiered signals as a method for students to express an interest in specific programs and have it recognized by programs in extending interview offers. The authors have no conflicts of interest to disclose. This study was IRB exempt.

Key words: Tiered-signaling, tokens, OBGYN residency match, preference signaling, ERAS, NRMP, USMLE Step scores.

Introduction

Competition for residency positions in the National Residency Matching Program (NRMP), which is used by more than 30,000 medical students in their quest to secure placement in a residency training program within the United States, has led to increasing numbers of applications by applicants[1]. In the 2022 cycle, the mean quota of positions available per OB/GYN program was 5, and the mean number of applications received via the Association of American Medical Colleges (AAMC) Electronic Residency Application Service (ERAS) by OB/GYN programs was 669.6 with just over 50% of these receiving a holistic review, and only 10% being extended an interview[2].

In an effort to encourage holistic review and decrease application inflation, 16 specialties participated in program signaling for the 2022-2023 NRMP residency match cycle[3,4]. Obstetrics and Gynecology (OBGYN)

was the only program using a two-tiered system that allowed applicants to assign signals (tokens) with their applications - 3 "gold" signals to indicate highest interest and up to 15 "silver" signals indicating very high interest[5]. Historically, USMLE step score performance has correlated with match success rates. In 2022, matched OBGYN applicants had a mean Step 2 CK score of 249 compared to 240 for unmatched applicants[6]. It is unclear how USMLE step score correlates to interview rates with the implementation of tokens. With Step 1 moving to a pass/fail grading system, knowledge of the correlation of Step 2 to interview rate success would be beneficial.

Our objective was to determine if the two-tiered preference signaling system implemented by OBGYN for the Match 2023 season had an impact on the rate of interview offers received by applicants. We also

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explored if the rate of interview offers differed by a candidate's USMLE step exam scores.

Materials and Methods

Cross-sectional survey of fourth year medical students participating in the OBGYN match in the 2022-2023 interview season at Indiana University School of Medicine (IUSM) – the largest allopathic medical school in the US. IUSM has 8 regional campuses where students can complete all 4 years of their training. IRB exemption was granted by IUSM prior to the start of the study. Anonymous survey questions included the number of interviews obtained from applications submitted with a gold signal (3), silver signal (15) and no signal (no cap). Respondents self-reported their step 1 and step 2 score which was converted into a quartile rank. Correlation between Step 1 score, Step 2 score and interview rate was calculated. Descriptive statistics and Spearman correlation analysis when appropriate were performed with SPSS version 28.0.

Results

Fifteen students identified as participating in the OBGYN match and all completed the survey (100%). Ten applicants (66.7%) were students from regional campuses. The average number of applications submitted was 69 (SD 11.3; range 51-90). Step 1 score percentiles were distributed as follows: 3 applicants scored in the 25th percentile or lower (20%), 4 applicants scored between the 25th and 50th percentile (26.7%), 4 applicants scored between the 50th and 75th (26.7%) and 4 applicants scored between the 75th and 100th percentile (26.7%). Step 2 score percentiles were distributed as follows: 2 applicants scored in the 25th percentile or lower (13.3%), 2 applicants scored between the 25th and 50th percentile (13.3%), 7 applicants scored between the 50th and 75th (46.7%) and 4 applicants scored between the 75th and 100th percentile (26.7%).

The mean number of interviews offered differed based on token provided with the application – gold 1.6 (SD 0.8), silver 6.6 (SD 2.9) and no token 7.3 (SD 4.8). The interview rate associated with each token was 53% for gold, 44% for silver and 14% for no tokens with an overall interview rate of 22.5% (Figure 1).
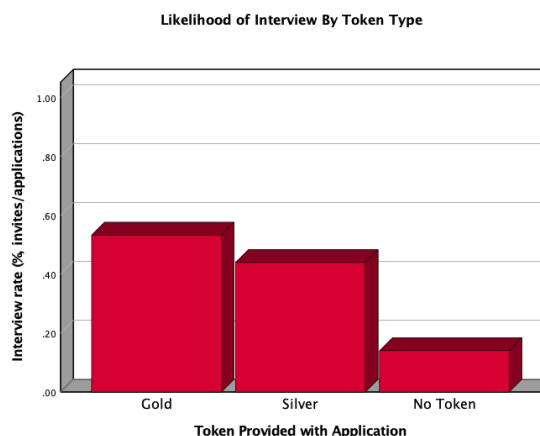

Figure 1. Interview rate for Gold, Silver, and no tokens expressed as a percentage of interview invitations offered per applications submitted.

Student step 1 quartile rank was not correlated with gold (Spearman 0.39, p 0.39), silver (-0.20, p 0.47) or no token interview rate (0.19, p 0.49). Step 2 quartile rank was also not associated with gold, silver, or no token interview rate (Spearman 0.14 p = 0.59, -0.42 p = 0.11, -0.09 p = 0.97).

Discussion

This study supports the use of tiered signals as an effective method for students to express an interest in specific programs and have that interest be recognized by residency programs for consideration in extending interview offers. The interview rate increased based on the type of token provided with gold signaled applications having the highest probability of being granted an interview. Interestingly, step 1 and step 2 score were not correlated with interview offers based on token type. This latter finding is reassuring as step 1 is now pass/fail and these results suggest that programs are basing interview invites on a more holistic review as opposed to simply standardized test performance.

Strengths of our study include the use of a single institution which standardizes the mentoring process for students going into OBGYN. Additionally, the response rate was 100% and all respondents provided their USMLE step 1 and step 2 score to allow for analysis. Limitations include the sample size though the number of students pursuing OBGYN

from this institution is comparatively large given the size of the medical school. Information regarding the residency programs where tokens were submitted was not evaluated, nor were other factors considered in a holistic review of applications.

Future directions of study could include an analysis of variables in addition to step 1 and 2 scores such as number of research publications, induction into medical honor societies, and academic performance. Knowledge of where medical students applied is also a future direction of research in this area.

The results of our study will help reassure students that their rate of interview invitations will not be affected by a transition from step 1 to a pass/fail grading. Strategic use of tokens will best position students for success in the OBGYN interview process.

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