Virtual Recruitment and Program Signaling

Fred Little MD (PD, Boston University)
Stokes Peebles MD (Section Chief/Associate PD Vanderbilt)

Applications per fellow and program have increased with virtual recruitment

<table>
<thead>
<tr>
<th>Grad Type</th>
<th>ERAS 2018</th>
<th>ERAS 2019</th>
<th>ERAS 2020</th>
<th>ERAS 2021</th>
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Average number of applications per fellow

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Average number of applications per program

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Source: AAAAI via ERAS, courtesy Amal Assa’ad
TPDs responded that virtual interviews improved logistics of the interview process

TPDs felt virtual interviews impaired assessment of applicants and showcasing program
TPDs responded that virtual interviews increased applications and interviews

TPD responded that virtual interviews had little effect on preparation, but large effect on expenses
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Preference for the upcoming recruitment season
How important is it to you that all A/I training programs agree to and adopt an identical interview strategy across the country?

![Bar chart showing the percentage of respondents]

Virtual recruitment - impacts

- Potential *differential* impacts across programs
  - Top applicants may disproportionally garner interviews at the expense of middle of the pack applicants
  - Smaller/less visible programs may have more interview offer acceptances that inaccurately reflect ‘true’ interest

- Likely *common* impacts across programs
  - Greater equity related to ease of applicants accepting interviews based on difference between residencies requesting time off for interviews
  - Lower cost for applicants – travel/lodging/coverage
  - Greater number of applications to review, and likely interview
  - Easier recruitment day coordination, but more faculty needed to interview applicants if more interviews are granted
Recruitment format – key considerations

• Weighing benefit of having applicants ‘vote with their feet’ when selecting programs at which they will interview
  • Applicants will apply only to programs in which they have a valid interest, eliminating congestion at the top
  • Does limit exposure to programs that they might have otherwise not considered

• Varied formats may cause inequities amongst programs’ abilities to demonstrate opportunities

Arguments in Favor of In-Person Interviews

• If given the option, no one wants to pay for travel to interview

• Vanderbilt PGY-3 salary is $66,743, certainly sufficient to pay for interviews (BU/BMC $72,532)

• Benefits to the program:
  • Current fellows have the opportunity to meet their prospective colleagues in person in informal setting
  • Ability to showcase facilities and programs
  • Opportunity to spend time in the city where training might occur
Signaling: Background

- Origin in economics/game theory
- Attempt to better select job candidates to interview when there are many more applicants than interview capacity
  - Assist in differentiation of generally similar applicants
- Can be applied amongst applicants with range of competitiveness for job being considered

Source: Am J Econ Microeconom; doi:10.1257/mic.5.2.99

Majority of A/I PDs are very or somewhat familiar with signaling...but nearly 50% are not.

N = 66

How familiar are you with the concept of applicant signaling in regards to trainee recruitment?

Very familiar (I have discussed this with other specialty/subspecialty PDs where applicant signaling has been adopted.)

Somewhat familiar (I have heard this mentioned and understand the concept.)

Minimally familiar (I am not familiar with applicant signaling.)
The arms race...

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Current state of signaling

- 2023: 18 specialties participating* (no subspecialties)
- Part of supplemental ERAS application** – available for program review concurrently with main application
  - Geographic census regions and rural/urban – narrative of rationale
  - Specific program signals – no narrative
    - Set number of signals (‘chips’) per applicant, specialty-specific
      - 3 – 30 (Dermatology – Orthopedics), IM=7, Peds=5
    - Programs do NOT know if applicants have signaled, nor to which other programs they have signaled
    - Programs need to opt-in to receive signals, known by applicants
- No changes to NRMP rules/guidelines, NOT intended for rank decisions

*Anesthesiology, dermatology, diagnostic radiology, interventional radiology, emergency medicine, general surgery, internal medicine, internal medicine/psychiatry, neurology, neurosurgery, obstetrics and gynecology, orthopedic surgery, otolaryngology, pediatrics, physical medicine and rehabilitation, preventive medicine, psychiatry, urology.

**ENT signaling for ’21 and ’22 coordinated through ENT society, likely ERAS supplem. ’23, same timing. Urology signaling (and Match) through AUA.
Geographic signaling

- Choose up to 3 of 9 geographic regions
  - Pitfalls - large ‘census divisions’, correspond less to distribution of A/I programs across US (to follow)

Source: AAMC

Distribution of A/I fellowship size skewed to smaller programs

(simplified*)

Incoming fellows per program

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<tr>
<th>Number of programs</th>
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<td>18% of programs</td>
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* '1-2' split evenly to 1 and 2, '2-3' split evenly to 2 and 3

[1,2 = 105 slots; 3,4 = 51 slots]

Source: AAAAI

Training Programs | AAAAI
A/I Program distribution by state does not consistently reflect population (and in some cases AMC) distribution.

Programs per state

- Does not reflect no. of PGY-4 slots/state
- No A/I program = 19 states (!)

Sources: AAAAI for programs/state
Under/over: F. Little general interpret. based on pop. rank from 2020 Census

Interview offer rate from signaled vs non-signaled programs

- Interview offer rate: interviews offered to applicants/applications submitted (x-axis)
- Quartiles: by total offers/total applications – surrogate for applicant competitiveness
- Closest non-signal: Offer rate for 6th program if a 6th program signal was offered

Source: Oto – H&NS; https://doi.org/10.1177/0194599822112
Applicant and Program satisfaction with signaling
(2 year data)

Applicant signaling – impacts and considerations

- General:
  - Applicants are more likely to be offered an interview at programs they have signaled (https://opdo-hns.org/mpage/signaling-updates)
  - Signaling will not likely move needle on applicants per program or applications per fellow ‘arms race’ esp. with virtual recruitment ...
  - But... should be helpful for interview selection amongst pool of similarly competitive applicants, and improve perception about number of applicants ‘left behind’ from interview offer due to limited interviewing bandwidth.

- Program-specific:
  - Lower impact on larger, more competitive programs, with possible applicant disadvantage
    - Applicants who have not signaled a program where majority of applicants have given signals may be less likely to be offered an interview
    - Helpful to smaller programs with lower visibility and/or limited faculty headcount with recent increase in applications/program
  - All-in or not; how many program signals (‘chips’) per applicant?
  - (F.L. opinion): Focus discussion on program signals over geographic/rural-urban given prior years’ experiences/testimonials in other specialties
    - Geographic preferences match program signals ~85% of time (AAMC)

Source: Oto – H&NS; https://doi.org/10.1177/01945998221121112
SUMMARY: POINTS FOR DISCUSSION

1. Should programs be able to decide whether to be in-person, hybrid, or virtual?
2. How important is it for all programs to have the same recruitment format?
3. Will applicant signaling improve applicant/program fit and be helpful for the majority of A/I applicants and programs, especially in context of virtual/hybrid recruitment?

Additional Resources

• Review article on virtual interviewing: Medical Teacher, 2022
  • https://doi.org/10.1080/0142159X.2022.2130038

• Specialties participating in signaling via AAMC/ERAS (16 plus OTO, Urology), and application guide slides
  • https://students-residents.aamc.org/applying-residencies-eras/specialties-participating-supplemental-eras-application
  • https://students-residents.aamc.org/media/12326/download?attachment

• ENT signaling outcomes – 2 years (updated site)
  • https://opdo-hns.org/mpage/signaling-updates

• ED and signaling “Making our preference known…” Editorial; (West J EM Jan 2022)
  • https://escholarship.org/uc/item/93t6c7th

• Applicant signaling – CON argument – “Sheriff of Sodium and Winners and Losers” (J Bryan Carmody MD, Oct 2020)
  • https://youtube.com/watch?v=mo_o4uT51aM&feature=share
Distribution of fellowship recruitment
(as listed – not ‘simplified’)

Incoming fellows per program

Source: AAAAI
https://www.aaaai.org/Professional-Education/Program-Directors/Allergy-Immunology-Fellowship-Training-Programs