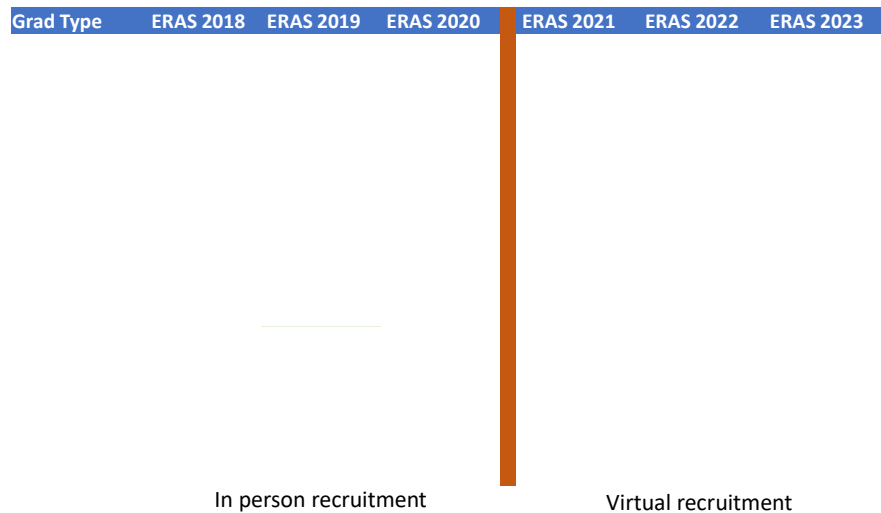


Virtual Recruitment and Program Signaling

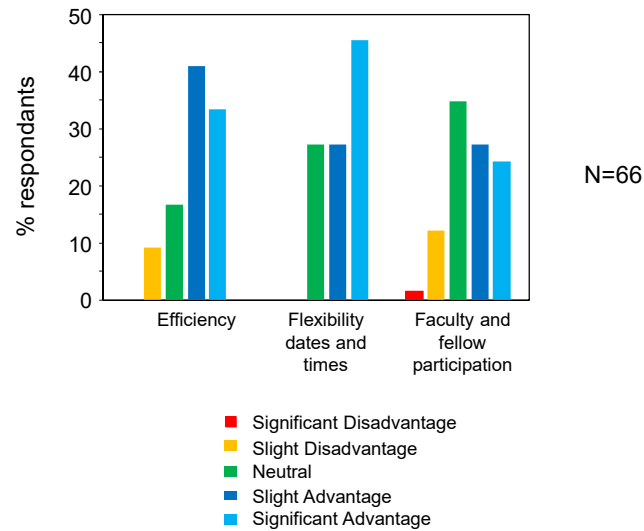
Fred Little MD (PD, Boston University)
Stokes Peebles MD (Section Chief/Associate PD Vanderbilt)

Applications per fellow and program have increased with virtual recruitment

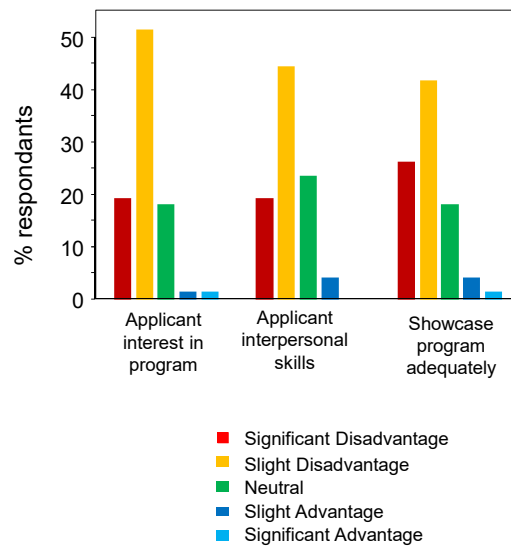


Source: AAAAI via ERAS, courtesy Amal Assa'ad

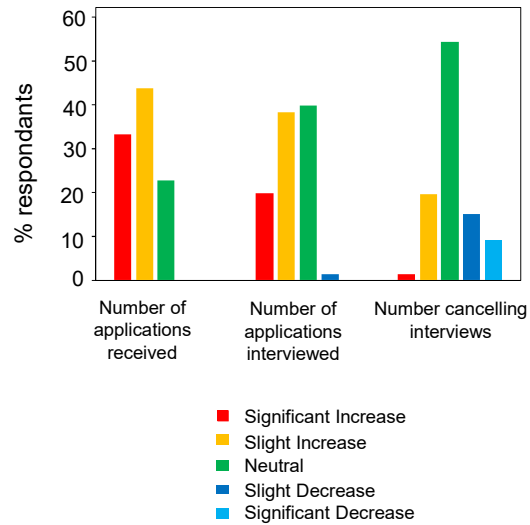
TPDs responded that virtual interviews improved logistics of the interview process



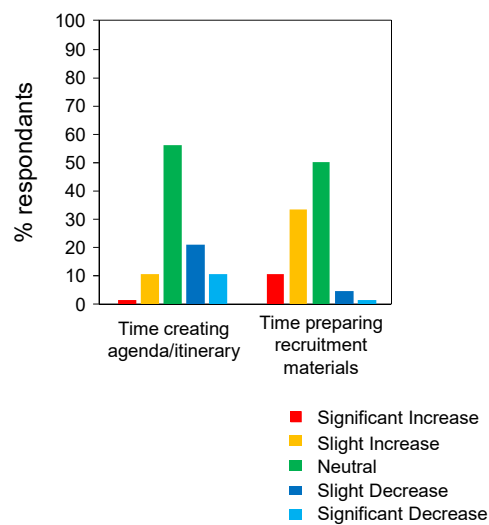
TPDs felt virtual interviews impaired assessment of applicants and showcasing program



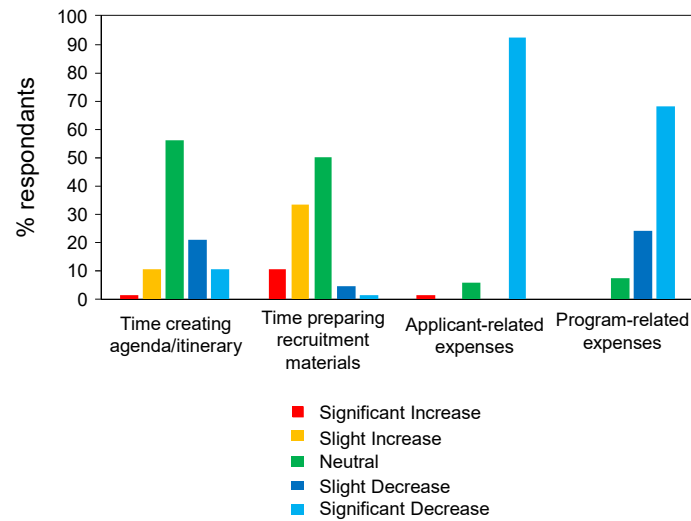
TPDs responded that virtual interviews increased applications and interviews



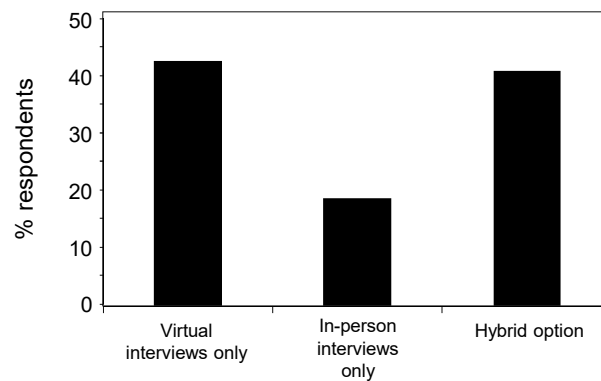
TPD responded that virtual interviews had little effect on preparation, but large effect on expenses



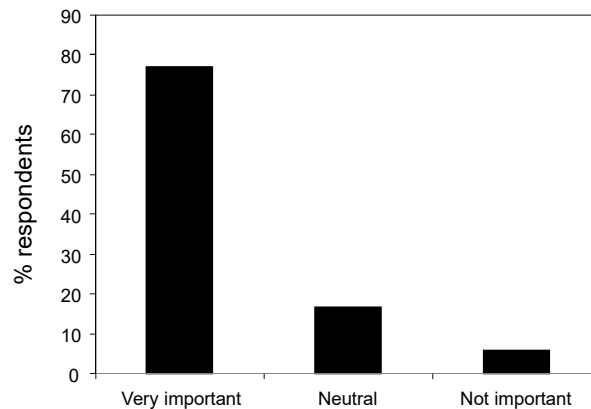
TPD responded that virtual interviews had little effect on preparation, but large effect on expenses



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?



Virtual recruitment - impacts

- Potential *differential* impacts across programs
 - Top applicants may disproportionately 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

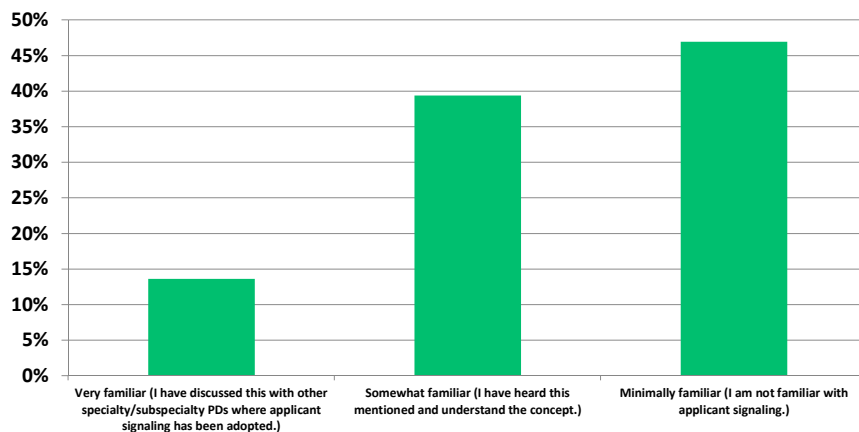
- Origin in economics/game theory
- Attempt to better select job candidates to interview when there are many more applicants than interview capacity
 - Assist in differentiation of generally similar applicants
- Can be applied amongst applicants with range of competitiveness for job being considered

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?



The arms race...

Grad Type	ERAS 2018	ERAS 2019	ERAS 2020	ERAS 2021	ERAS 2022	ERAS 2023
Total Applicants						
DO	19	20	22	20	35	39
IMG	40	59	48	67	46	52
MD	99	116	105	132	117	127
Overall	158	195	175	219	198	218
Average number of applications per fellow						
DO	29	29	34	32	44	41
IMG	32	31	37	42	37	37
MD	21	24	23	26	28	32
Overall	25	27	28	31	33	35
Average number of applications per program						
DO	8	8	10	8	20	20
IMG	17	25	24	36	22	24
MD	29	37	33	43	42	49
Overall	53	69	66	87	83	93

In person recruitment

Virtual recruitment

Source: AAAAI via ERAS, courtesy Amal Assa'ad

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.

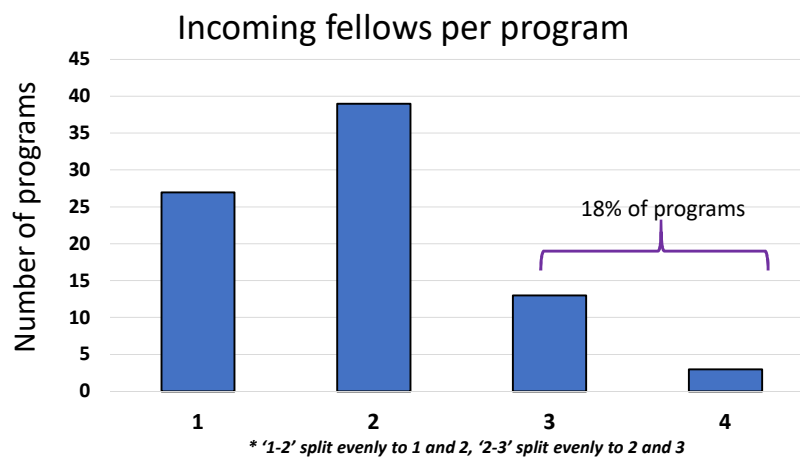
Geographic signaling

- 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*)

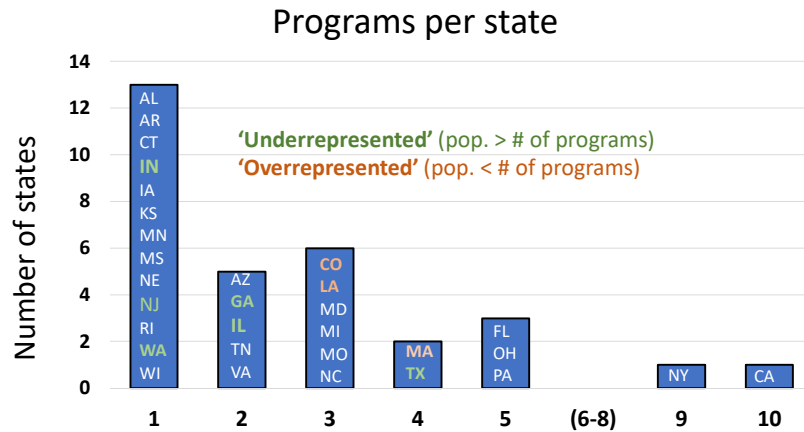


[1,2 = 105 slots; 3,4 = 51 slots]

Source: AAAAI

[Training Programs | AAAAI](#)

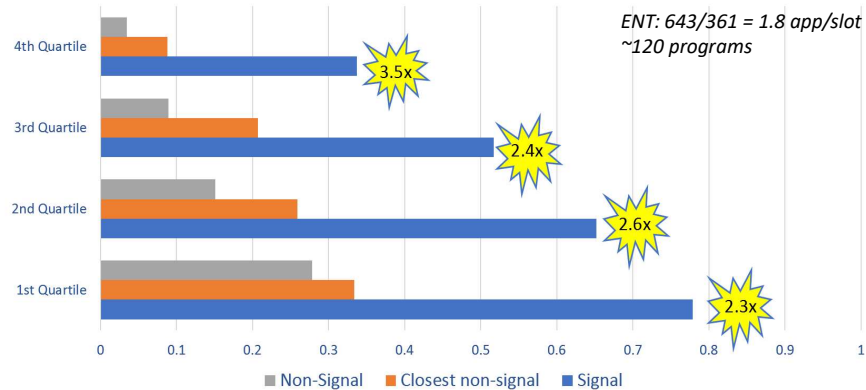
A/I Program distribution by state does not consistently reflect population (and in some cases AMC) distribution



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

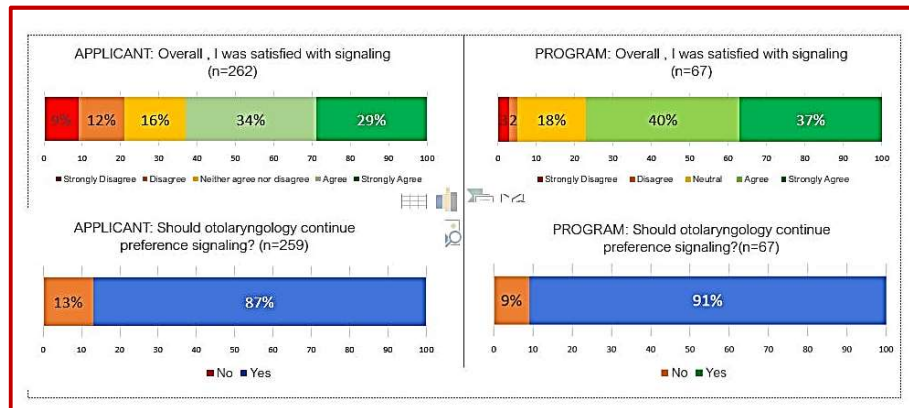
Interview offer rate from signaled vs non-signaled programs (ENT – 5 signals/applicant)



- 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)



Source: Oto – H&NS; <https://doi.org/10.1177/0194599822112>

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)

SUMMARY: POINTS FOR DISCUSSION

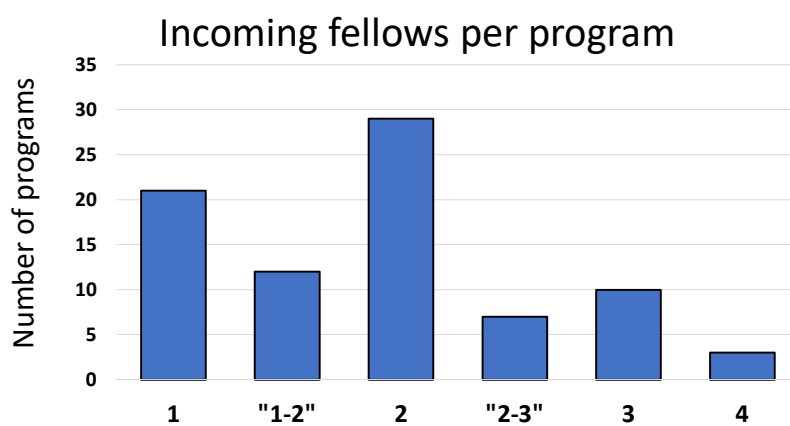
1. Should programs be able to decide whether to be in-person, hybrid, or virtual?
2. How important is it for all programs to have the same recruitment format?
3. Will applicant signaling improve applicant/program fit and be helpful *for the majority of A/I applicants and programs*, especially in context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



Source: AAAAI

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