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COMMENTARY

Five Is Not Enough: The Case for Tiered Program Signals in Family Medicine Residency Applications

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ABSTRACT

Application inflation has become a persistent and costly challenge within the residency application process. Family medicine applicants historically have applied to more than 50 programs on average, placing an increasing financial burden on applicants and overwhelming programs with application volumes that can impede holistic review. Program signaling was introduced in family medicine in 2024 to mitigate these pressures, yet the current five-signal model does not do enough to differentiate applicants' level of interest in programs and has resulted in signal concentration.

Experiences from other specialties—such as otolaryngology, internal medicine (IM), general surgery, and anesthesiology—have demonstrated that higher-volume or tiered signaling systems reduce signal concentration, promote more strategic application behaviors, and can meaningfully decrease the number of applications submitted. IM's two-tier model, which uses both gold and silver signals, offers clearer gradations of applicant interest while preserving interview access, even for nonsignaled programs.

Drawing on these lessons, we propose that family medicine adopt a moderate-volume, two-tier signaling system with 10 to 15 total signals. Such an approach would better distinguish applicant preferences, reduce application inflation, and support mission-aligned recruitment. To be successful, this strategy must be paired with unified guidance for both applicants and programs, including clear expectations that signals inform interview decisions rather than ranking. Future research—including perspectives from program directors, advisors, and applicants—is essential.

Despite evidence that applying more broadly does not necessarily improve match outcomes, application inflation—the practice of applicants submitting an increasing number of residency applications to maximize their chances of matching—has become a defining challenge in the residency application process across nearly all specialties, including family medicine.[1] Between 2016 and 2023, family medicine applicants on average applied to more than 50 programs.[2,3] Application inflation places financial strain on applicants and simultaneously burdens residency programs with overwhelming applicant loads that may hinder holistic review.[4] In a modeling-based analysis, one study found that application capping benefited both applicants and programs through application cost savings and reduced administrative load, respectively.[1]

HISTORY OF PROGRAM SIGNALING

Program signaling began in otolaryngology (ENT) in the 2021 Electronic Residency Application Service (ERAS) cycle after years of increasing competitiveness and application inflation, with applicants submitting an average of 54 applications in 2020.[5,6] Earlier proposals to address application inflation within the specialty included advisor-guided application limits,[7,8] mandatory secondary

applications,[7] formal ERAS application caps,[9] and star signaling.[10] While secondary applications had little impact on applicant behavior, star signaling became the conceptual foundation for program signaling.[10,11] Through the ERAS system, program signals provide applicants the opportunity to express interest in a limited number of programs as they apply and give programs an additional data point in deciding who to offer an interview invitation.[12]

PROGRAM SIGNALING IN FAMILY MEDICINE

Family medicine adopted program signals in 2024, with applicants receiving five signals. This number was selected by the American Academy of Family Physicians (AAFP) in collaboration with the Association of Family Medicine Residency Directors after reviewing Association of American Medical Colleges (AAMC) data and stakeholder listening sessions, which suggested that most US graduates matched at one of their top five ranked programs.[13] Since adopting signaling, family medicine has seen declines in the average number of applications submitted per applicant and per program (Tables 1 and 2).[14] However, on average, applicants still submit more than 40 applications—far above the roughly 10 ranked programs needed to reliably match for US MD and DO graduates.[3,15,16]

Interview data further illustrate how family medicine's current signaling volume shapes behavior. In 2026, US applicant mean interview rates for signaled programs were 71.5% and 72.8%—compared to 44.7% and 49.0% for nonsignaled programs, respectively—for DO and MD applicants (Table 3).[17] Because MD and DO applicants still have nearly a 50% chance of receiving an interview from a nonsignaled program, family medicine signals are less discriminating than in other specialties. In contrast, a program signal nearly doubles the mean interview rates for international medical graduate (IMG) applicants, although their interview rates remain substantially lower than those of US MD and DO applicants (Table 3).[17]

While family medicine application volumes have decreased with the introduction of program signals, they still greatly exceed what applicants need to match. One issue with a small number of program signals is signal concentration, where a select number of top programs receive many applicant signals. In ERAS 2026, 10% of family medicine programs received 32% of signals.[18] Signal concentration limits the utility of signaling overall: Programs that receive many signals struggle to discern applicants' true intent and require significant administrative resources to evaluate the applicant volume, while programs that receive few signals cannot reliably use signaling as an interview criterion. Based on the evidence showing that applicant volume has plateaued in the last several years (Table 1), the current signaling system likely has reached its limit in reducing application volume and its usefulness to programs in reducing administrative load.

EVOLUTION OF PROGRAM SIGNALING IN ENT

Since implementing signaling, ENT has progressively increased the number of available signals. Initially, applicants were given a low volume of signals: five in 2021, four in 2022, and seven in 2023. Although low-volume signaling was associated with higher interview yields from signaled programs compared to nonsignaled programs, it also led to substantial signal concentration, with 50% of signals directed to only 24% of programs during the first 2 years.[19] Furthermore, low-volume signaling did not reduce applications: Applicants still submitted more than 70 applications on average in the 2021 and 2022 ERAS cycles.[20]

TABLE 1. Average Family Medicine Applications Submitted Per Applicant by Year (ERAS 2022–2026, After Supplemental Offer and Acceptance Program)

Grad type	2022	2023	2024	2025	2026
DO	51.76	50.79	44.70	40.97	37.45
IMG	64.47	60.45	50.54	43.54	44.87
MD	35.53	33.21	31.17	30.16	29.80
Overall	**56.12**	**53.09**	**45.49**	**40.62**	**40.98**

Data as of May 29, 2026.
Adapted from: Association of American Medical Colleges. ERAS 2022-2026 Residency Applicant/Application Volume. AAMC; May 29, 2026. Accessed July 4, 2026. https://www.aamc.org/data-reports/publication/eras-statistics
Abbreviations: ERAS, Electronic Residency Application Service; IMG, international medical graduate

TABLE 2. Average Number of Applications Received Per Family Medicine Program by Year (ERAS 2022–2026,, After Supplemental Offer and Acceptance Program)

Grad type	2022	2023	2024	2025	2026
DO	188.66	169.41	138.86	126.65	105.55
IMG	651.71	555.16	433.84	423.05	476.69
MD	118.18	100.66	89.30	84.86	83.61
Overall	**958.55**	**824.57**	**661.38**	**634.56**	**665.58**

Data as of May 29, 2026.
Adapted from: Association of American Medical Colleges. ERAS 2021-2026 Residency Applicant/Application Volume. AAMC; May 29, 2026. Accessed July 4, 2026. https://www.aamc.org/data-reports/publication/eras-statistics
Abbreviations: ERAS, Electronic Residency Application Service; IMG, international medical graduate

TABLE 3. Family Medicine Signaling to Interview Rate Data (ERAS 2026, Before Supplemental Offer and Acceptance Program)

Grad type	Mean	
	Signal	No signal
DO	71.5%	44.7%
IMG	14.8%	5.5%
MD	72.8%	49.0%
Overall	43.7%	20.8%

Data as of February 2, 2026.
Adapted from: Association of American Medical Colleges. ERAS Statistics: ERAS Specialty Signaling to Interview Relationship Dashboard. Accessed February 25, 2026. https://www.aamc.org/data-reports/publication/eras-statistics
Abbreviations: ERAS, Electronic Residency Application Service; IMG, international medical graduate

Shifting to a high-volume system with 25 signals in 2024 had a greater impact. When comparing low-volume (2021–2023) with high-volume (2024–2026) cycles, the mean number of applications submitted per applicant decreased by 37%,with applicants submitting an average of 43.5 applications in the 2026 cycle.[20,21] In this model, individual signals convey less specific interest, but the absence of a signal carries more weight and is interpreted as low interest.[22] High-volume signaling appears to benefit applicants with fewer traditional markers of competitiveness, such as research output and volunteering.[23] This decrease in average applications with a high-volume approach is not unique to ENT: Urology saw a 25% reduction in applications per applicant and a similar drop in review costs after adopting high-volume signaling.[24]

Although ENT differs from family medicine in competitiveness and applicant characteristics, its experience suggests that increasing signal volume may reduce signal concentration and encourage more strategic application practices. While family medicine has seen modest improvements in application volume with a low-volume approach, there is still room to reduce signal concentration and the number of applications. In our opinion, five signals are not enough.

THE CASE FOR A MODERATE-VOLUME, TIERED SIGNALING MODEL IN FAMILY MEDICINE

In ENT, high-volume signaling reduced applications and made interviews less likely without a signal—an outcome relevant to family medicine. Per the AAMC's preliminary report on program signals published in 2023, specialties that used large-volume or two-tier signaling approaches had the largest drop in the average number of submitted applications per applicant.[25]

Internal medicine (IM) is the most relevant comparator for family medicine. Both specialties have large and heterogeneous applicant pools—including US MDs, US DOs, and IMGs—and each has more than 650 residency programs. IM's competitiveness for US MD applicants is similar: In 2024, family medicine had a 98.8% match rate and IM a 97.8% match rate, with US MD applicants in both specialties achieving near-certain match outcomes with 10 contiguous ranks on their match list.[15]

Aiming to mitigate application inflation and improve match efficiency, IM transitioned from a single-tier approach with seven signals to a two-tier system with three gold signals and 12 silver signals for the 2024–2025 application cycle.[26] IM's transition to expanded tiered signaling increased the disparity in interview rates between signaled and nonsignaled programs (approximately 44%–59% vs 15%–18% for US DOs and MDs, respectively), reduced signal concentration among gold signals, and was associated with subsequent reductions in application volumes.[17,21,27] Importantly, both gold and silver signals continued to yield substantial interview rates while the absence of a signal did not eliminate the possibility of an interview. This system thus preserves interview access for applicants while promoting strategic application behavior and providing programs with clearer indicators of genuine interest. Other specialties, including general surgery and anesthesiology, have similarly moved away from low-volume signaling and expanded the number of available signals, with general surgery increasing from five to 15 signals and anesthesiology from five to 15 total signals (five gold, 10 silver).[28,29]

We propose that family medicine follow in IM's footsteps and adopt a two-tier approach with 10 to 15 total signals in which gold signals communicate an applicant's highest interest and silver signals communicate very high interest. A moderate-volume, tiered system would:

- Offer clearer differentiation of applicant interest to programs;
- Reduce signal concentration;
- Motivate applicants to use their expanded signals strategically, given the expectation that this system will result in fewer interviews from nonsignaled programs; and
- Preserve flexibility for applicants with broad geographic or mission-driven preferences.

Nevertheless, a moderate-volume, two-tier system does have drawbacks. Less-competitive applicants and IMGs rely on applying broadly to increase their interview yield. In 2024, IMGs required nearly 20 contiguous ranks to guarantee matching.[30] Although offering 10 to 15 signals would expand options compared to the current five, fewer interviews from nonsignaled programs could disproportionately affect some IMG applicants who rely on broad application strategies due to lower interview yield (Tables 1 and 3). However, analysis of recent ERAS data suggests that program signaling may be particularly valuable for IMGs, with mean interview rates approximately doubled at signaled programs compared to nonsignaled programs.[17] Because ERAS does not separately report US IMG and non-US IMG applicants in its publicly available data, how changes in preference signaling may affect these groups differently is unclear. Individuals participating in the couples match may similarly be affected by receiving fewer interview invites from nonsignaled programs. Each applicant should still meet with their advisor to individualize their application strategy using published ERAS data.

UNIFIED GUIDANCE FOR APPLICANTS AND PROGRAMS

Regardless of the system chosen, programs and applicants must receive clear guidance on how to use program signals. AAFP has published general guidance for applicants; however, the current guide does not provide applicants with data-driven guidance from previous application cycles. Anesthesiology's guide is particularly exemplary in this regard, as it provides data on the outcomes of program signaling, giving applicants more objective information to guide their own signaling.[29] In an expanded and tiered signaling system, programs will need

guidance on how to interpret gold and silver signals and, based on the total number of signals they receive, how to consider applicants who have not signaled them.

FUTURE DIRECTIONS

As it refines its signaling system, family medicine must remain responsive to the needs of programs, applicants, and advisors. Several studies have examined programs' use of signals and the reception of signaling within family medicine.[31-34] One Council of Academic Family Medicine Educational Research Alliance (CERA) study found that most program directors viewed five signals as the most appropriate number[34]; however, to our knowledge, no studies have explored which signaling strategy program directors would prefer if presented with the alternative structured signaling models used in other specialties. Additional data from advisors are also needed, as their guidance may influence how applicants use signals. A CERA study administered through the clerkship director survey could provide important insights into how advisors guide applicants on the use of signaling.

In addition, while applicant perspectives on signaling have been described in other specialties,[35-39] to our knowledge, no such data exist in the family medicine literature. To better understand applicants' experiences and perceptions of signaling, family medicine programs could administer brief post-match surveys to their applicants, as has been done in other specialties. The in-training exam (ITE) offers an opportunity to collect large-scale data from first-year family medicine residents. While residents are now asked on the ITE whether they matched to a program they signaled, further questions about how residents used signals during their match could provide longitudinal insight into evolving applicant behaviors in response to changes in the signaling system. More broadly, we implore AAFP's Residency Selection Improvement Initiative to allocate more resources to developing a fair, data-driven signaling system that supports both applicants and programs.[40]

CONCLUSIONS

Program signaling reform should not be the only strategy to improve the application process for applicants and programs; however, it is an important step. The tiered model we suggest here may not be the perfect final solution, but we challenge AAFP to move toward a new signaling model that helps to address application inflation, ease program administrative burden, and match more students in family medicine. When it comes to signaling in family medicine, we believe that the data speaks for itself, and five is not enough.

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