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Proposed Changes to the 2021 Residency Application Process in the Wake of COVID-19

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[footnote] *This Perspective was originally submitted to Academic Medicine on April 2, 2020, before many of the changes suggested and implemented by the Association of American Medical Colleges and other organizations. The authors are pleased that many of their proposals have been adopted, including pushing back the date residency programs can access applicant data in the
Electronic Residency Application Service to October 21, 2020; canceling all visiting rotations for the summer and fall of 2020; and urging all residency programs to offer only virtual interviews.

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Abstract

The COVID-19 pandemic has brought unique challenges to the delivery of undergraduate medical education, particularly for current third-year medical students who are preparing to apply to residency. In mid-March, medical schools suspended all clinical rotations for the remainder of the 2019-2020 academic year. As such, third-year medical students may not be able to complete sufficient clinical experiences to make important career choices before they have to submit their residency applications. While the decision to suspend clinical rotations was necessary to protect students, specialty organizations and residency programs must mitigate the deficits in students’ clinical education caused by the COVID-19 pandemic.

In this Perspective, the authors identify potential challenges for third-year medical students and advocate for solutions to improve the residency application process for students and programs. First, they propose delaying the date that programs can access applicant data through the Electronic Residency Application Service, thereby affording students more time to complete clinical experiences, solidify their specialty decision, and strengthen their residency application. Second, the authors recommend a restriction on the number of visiting rotations that students are expected to complete to allow for a more equitable distribution of these important experiences. Third, they suggest that program directors from each specialty agree on a maximum number of applications per applicant (based on historical data) to curb an upsurge in applications that may stem from the unique circumstances created by COVID-19 without causing applicants undue stress. Lastly, the authors advocate that residency programs develop infrastructure to conduct video-based interviews and engage students through virtual networking events.
Amidst the unique environment created by COVID-19, the authors urge governing bodies, specialty organizations, and residency programs to consider these recommendations to improve the efficiency and reduce the stress surrounding the 2021 Match.
As the U.S. health care system grapples with the COVID-19 pandemic, unprecedented changes in medical education have emerged that will significantly affect the upcoming 2021 residency application process. This spring, several medical schools graduated their fourth-year students early so these new physicians could alleviate workforce shortages in regions severely affected by COVID-19; simultaneously, the educational trajectory of third-year medical students was brought to a halt in mid-March when schools suspended clinical rotations. Estimates suggest that the COVID-19 pandemic might extend into the late summer in some regions of the U.S., with a second surge in cases in the fall.1 As such, most medical schools have suspended clinical rotations for the remainder of the 2019-2020 academic year. While this change is needed to protect learners, it creates a difficult and uncertain situation for both students and residency programs. Governing bodies in medicine need to take concrete actions to mitigate the deficits in students’ clinical education caused by the COVID-19 pandemic.

This crisis is not the first time that medical students applying to residency have been unable to complete core and elective rotations at their home institutions because of a disaster scenario. Recent examples include medical students at the University of Puerto Rico School of Medicine following Hurricane Maria2 and students at medical schools in Gulf states like Louisiana following Hurricane Katrina. However, the situation created by COVID-19 is unprecedented in its scope, affecting medical students across the U.S.

In the following sections, we identify potential challenges for third-year medical students navigating the upcoming 2021 Match and advocate for solutions to improve the residency application process for them and residency programs.
Anticipated Challenges for Third-Year Medical Students

Medical students typically complete their core clerkships, solidify the foundation of their medical education, and make career decisions in the spring of their third year. Historically, one-third of students do not decide on a specialty until they have completed their core third-year rotations. They often rely on noncore elective rotations, sub- or acting-internships at their home institution, and visiting rotations to confirm these decisions.

For students who struggled with the United States Medical Licensing Examination (USMLE) Step 1, these elective and visiting rotations offer a crucial opportunity to demonstrate their clinical acumen and make their residency applications more competitive. In particular, underrepresented minority students may be disproportionately affected by a reduction in clinical exposure given that they historically do not perform as well on Step 1 compared to their peers.

Prior to COVID-19, several articles have proposed eliminating using a minimum Step 1 score to determine residency interviews as a strategy to reduce racial bias in the residency application process. Additionally, the USMLE has announced that it will change Step 1 scoring to pass/fail in part to address this overemphasis on standardized testing scores. Given that students will have fewer opportunities for clinical experiences because of COVID-19, the upcoming 2021 residency application process could further rely on standardized testing scores, exacerbating existing disparities. Likely, this will most severely affect those applicants applying to more competitive fields, which place greater emphasis on standardized testing performance, as well as those applicants with underrepresented identities including race, gender, and older age. These applicants would benefit from residency programs recognizing the inequalities that Step 1 score minimums promote, particularly with the dearth of clinical opportunities during this particular Match cycle.
In addition to the loss of total available months of clinical training and specialty exposure, there could be a shortage of clinical rotation spots once medical schools reopen, creating a more competitive environment among students who wish to complete these rotations. To meet graduation requirements, students will need to prioritize their core clerkships, which will limit their exposure to noncore specialties (urology, orthopedic surgery, neurosurgery, otolaryngology, etc.), potentially resulting in a lower volume of students applying to these specialties. In addition, current third-year medical students may struggle to obtain sufficient experiences to make important career decisions. Given the established association between specialty regret and burnout, an accelerated timeline for making specialty decisions could exacerbate burnout in these future physicians.\(^9\)

The shortened timeline for completing clinical rotations also may affect students’ ability to explore novel educational environments and to assess mutual “fit” between themselves and a residency program, which happens during visiting rotations. Often, the letters of recommendation obtained during these rotations are among the most important factors considered by program directors when making interview decisions.\(^{10,11}\) In less competitive specialties, more than 50% of applicants report completing at least 1 visiting rotation.\(^{11}\) For many competitive specialties, these rotations are viewed as a de facto requirement for applying to residency, with applicants performing 2 to 3 month-long visiting rotations on average, in addition to a rotation at their home institution in their chosen specialty.\(^{10}\) Programs already had a limited number of students (home or visiting) they could accommodate. Now, these clinical rotations will become a scarce commodity if medical schools reintroduce students to the clinical environment.
Finally, there is wide variation in the amount of clinical experience that medical students obtained prior to clinical rotations being suspended because of COVID-19. While all students will have fewer clinical experiences, those enrolled in medical schools with a traditional 2-year preclinical curriculum will have 6 months less clinical time than students enrolled in programs with an accelerated one-and-a-half-year preclinical curriculum. Furthermore, students enrolled in 3-year programs may be particularly disadvantaged, as their clinical curriculum may already be truncated.\textsuperscript{12} Residency programs will need to critically assess the total volume of clinical experience for each applicant, given the diversity of curricular structures and the differing impacts of COVID-19 for each type of medical school curriculum. Depending on the structure of their medical school, foreign medical graduates also may experience a loss of essential clinical time.

**Proposals for the Upcoming 2021 Match Cycle**

To address these anticipated challenges, we propose the following 4 solutions (see Figure 1).\textsuperscript{*}

**Changes to the Electronic Residency Application Service (ERAS) schedule**

First, we suggest delaying when residency programs can access applicant data through ERAS. Currently, ERAS allows programs to download applications from their online servers starting in mid-September. However, the actual date of first download and the frequency with which applications are updated in the subsequent months vary between specialties. Delaying the date of first download by a few weeks to months would allow medical students to maximize their limited time to complete core clerkships as well as visiting or elective rotations. Each specialty could collectively determine (and should publicize) its own agreed-on timeline for initial data extraction from ERAS, based on the anticipated volume of applicants, requirements for visiting
student rotations, and the typical interview schedule. For example, internal medicine and dermatology would need very different timelines.

A delay in the initial download date by even a month would allow students the opportunity to have additional clinical experiences, which would aid both their specialty decision making process and the competitiveness of their application. This change could be accomplished without significantly interrupting interview dates or the date of the National Resident Matching Program (NRMP) Match. However, delaying the date on which programs first access applicant data may require residency programs to review applications on an accelerated timetable, which could prevent them from performing a holistic review and force them to rely on test score minimums, a strategy with potential negative consequences as discussed above.

**Limits on visiting rotations**

Second, we recommend a formal restriction on the number of visiting rotations medical students are expected to complete, an approach already supported by program directors.\(^6\) Each specialty should come to a consensus on the number of visiting rotations that are expected of their applicants. Likely this year that number will be lower than in previous years. This change will allow for a more equitable distribution of what will undoubtedly be a scarce resource. Visiting rotations are also costly; placing a restriction on them may alleviate some financial pressures on students to choose one specialty over another.\(^11\) In addition, the educational value of these rotations has been questioned, and students often view them more as an audition than an opportunity to garner clinical skills.\(^13\)

While visiting rotations are typically 4 weeks long, programs also might consider shortening their duration, which would still allow students to assess the “fit” between themselves and the program, while providing more students with the opportunity to participate in these essential
experiences. Conversely, restricting visiting rotations will reduce students’ opportunities to obtain clinical experiences in diverse learning environments and to demonstrate interest in multiple geographic regions, which could negatively impact their specialty choice and their competitiveness to match at specific programs.

We are not aware of any literature demonstrating the efficacy of rationing away rotations as we suggest, given that in prior disaster scenarios only individual schools or regions were affected and large-scale policies were not required. For example, students at the University of Puerto Rico School of Medicine were able to complete their rotations at programs in the continental U.S. following Hurricane Maria, and students at Tulane University School of Medicine were able to complete their rotations at Baylor College of Medicine following Hurricane Katrina.

**Limits on the number of applications per applicant**

Third, we propose a specialty-specific cap on the number of applications that each medical student can submit through ERAS. Over the last 2 decades, the number of applications per applicant has increased substantially.\(^{14}\) Annual data from the NRMP suggest that each specialty has a unique threshold for the number of applications and interviews necessary for a student to have a high probability of matching.\(^{15}\) No evidence suggests that additional applications confer improved outcomes, while research has shown that superfluous applications lead to increased costs and inefficiencies in the process.\(^{16}\) We anticipate that the uncertainty associated with the COVID-19 pandemic and the widespread disruption of medical education could exacerbate this tendency for students to apply to an excessive number of residency programs.

Additionally, if there is an intentional delay in the first download date for applications, residency programs may be overwhelmed with the number of applications that need to be reviewed in a truncated time period. To address these concerns, we recommend that program directors from
each specialty agree on a maximum number of applications allowed per applicant. Research has already demonstrated an existing consensus among program directors that application numbers should be capped. This approach could curb an upsurge in applications stemming from the unique environment created by COVID-19, without causing undue panic among students, which could occur if a cap is imposed that they perceive to be so low as to be disadvantageous. We recognize that a cap on the number of applications may disproportionately affect applicants who are perceived as less competitive, including international and osteopathic medical students and students with relatively low standardized testing scores. However, a permissive specialty-specific cap improves the efficiency of the application process without adversely affecting the vast majority of applicants. For example, a reasonable strategy could be to limit applicants to the average number of applications submitted in the 2020 cycle (e.g., for pediatrics and orthopedic surgery that was 36 and 82, respectively).17

**Virtual interviewing and networking**

Lastly, if the heavy restrictions on domestic travel remain in place nationally or in certain regions of the country as COVID-19 outbreaks linger, residency programs may need to develop the infrastructure for video-based interviews as well as for virtual networking opportunities. Many fellowships that typically interview in the spring have already transitioned to synchronous video interviewing (live video and audio between the applicant and interviewer), a method supported by existing evidence.18 Asynchronous video interviews (recorded applicant responses to specific questions that are later viewed by interviewers) could be considered as well. These have been in use by all emergency medicine programs and 1 obstetrics and gynecology program for the last 3 years.19,20
To ensure applicants’ exposure to the unique characteristics of a residency program, virtual networking events should be considered, during which applicants can interact with residents, faculty, and other program members. Additionally, programs should consider expanding their virtual and online presence (department websites, social media pages, video content, etc.). We strongly recommend that residency programs restructure their traditional interviewing methods to accommodate the rare situation we are in and that they begin these preparations early.

Conclusions

Amidst the unique environment created by the COVID-19 pandemic, we urge the Association of American Medical Colleges, the NRMP, medical schools, residency program director associations, and specialty organizations to consider the solutions we have proposed to improve the efficiency and reduce the stress surrounding the 2021 Match. Finally, we acknowledge the adaptability and perseverance that third-year medical students have shown during this frustrating and uncertain time, and we urge them to embrace these qualities, which will serve them well in the Match as well as in life.
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[figure legend]

**Figure 1** Four proposed modifications to the 2021 residency application process given changes to medical education as a result of the COVID-19 pandemic. Abbreviation: ERAS, Electronic Residency Application Service.
4-Pronged Proposal for the 2021 Match Cycle

1. Delay the date that residency programs can access applicant data through ERAS

2. Restrict the number of visiting rotations that applicants can complete

3. Establish a specialty-specific cap on the number of applications each applicant can submit

4. Develop the infrastructure to engage applicants through virtual interviews and networking events