Opinion & Special Articles: Maximizing Inclusiveness and Diversity Through Virtual Residency Applications and Interviews

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A diverse workforce is critical to providing high-quality, equitable neurologic care. Many neurologic conditions disproportionately affect Black and Latinx people, but these populations have limited access to neurologic care.1,2 Although healthcare disparities can be reduced with a diverse workforce,3–7 just 2.8% of neurologists are Black and 7.2% are Latinx, compared with the most recent US census with 12.8% of individuals identifying as Black and 18.4% as Latinx.8,9 The gap also exists at the trainee level; 4.4% of neurology residents are Black and 7.2% are Latinx.10 Recruitment of an inclusive residency class is paramount to addressing these inequities.3,5,7,11 A record of 42,508 medical students and physicians applied for residency positions in the United States in 2020–2021, as the application season moved to a virtual format because of the COVID-19 pandemics. Future residency application seasons will likely be a hybrid of in-person and virtual recruitment. This change presents both unique opportunities and challenges for the recruitment of a diverse and inclusive residency class.13

With careful planning, virtual recruitment and interviewing could be a powerful tool for improving equity, although virtual interviewing also carries the risk of exacerbating both conscious and unconscious bias. Residency programs, program directors, and interviewers must proactively plan to maximize inclusiveness and address bias, which otherwise could further increase gender and racial disparities in medicine. Here, we provide a number of recommendations for recruiting, interviewing, and ranking applicants in today’s virtual landscape. These recommendations mainly focus on virtual recruitment, but some, such as moving to a holistic application review rather than strict United States Medical Licensing Examination (USMLE) scores or grade-point average (GPA) cutoffs, will help to improve overall diversity and inclusiveness, consistent with our field’s goals.14,15

Challenges

The process of residency recruitment is fundamentally different for a virtual application season. Although these changes affect all candidates, it is important to note that in-person recruitment activities have historically been helpful toward the goal of inclusion and diversity in residency programs,16 overcoming risk of bias (in part) through relationship building. Although visiting clerkships can be a financial hardship for some,17 many programs and medical schools offer fully funded visiting clerkships for applicants who are underrepresented in medicine (UIM). Because visiting away rotations were canceled for the 2020–2021 academic year,18 UIM applicants were disproportionately affected by such closures, decreasing opportunities to obtain letters of recommendation and decreasing exposure to subspecialized fields that may be unavailable in their medical schools.

In the current era, there is an increased number of applicants—especially previously unknown applicants, which amplifies the challenge of selecting whom to interview. Many programs use USMLE and GPA cutoffs in the decision to interview applicants; however, standardized tests are notoriously biased against UIM applicants, and such cutoffs disproportionately screen out...
that need to be addressed.22 Not every applicant has access to
increase in the number of applications and interviewees, the
addition of lag time,23 and create risk of bias. As such,
Virtual or video interviews inevitably lose some of the richness
of human interaction, such as the loss of nonverbal cues and
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otherwise qualified and diverse applicants.11,19-21 With the
increase in the number of applications and interviewees, the
reliance on older algorithms for interviewing and ranking
needs to be reevaluated.

Finally, the virtual interview format also has unique challenges
that need to be addressed.22 Not every applicant has access to
ideal lighting, Internet, and environment for the interview day.
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of human interaction, such as the loss of nonverbal cues and
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Opportunities
Although the COVID-19 pandemic has produced new chal-
genies may overcome financial and logistical hurdles to students
gaining exposure to specialties, even if the full breadth of
an away rotation is not fully recapitulated.27 Finally, creation of
online educational content, such as a repository of case videos,28
may both improve house staff education and showcase the ed-

Virtual events and outreach to encourage relationship building
and mentoring can have many more attendees now, serving as
opportunities to provide more context to both programs and
applicants. Although these events may provide a first glimpse of
the possibility of a career in neurology for medical students at
any institution, invitations should be especially directed to
schools with high proportions of students who are UIM, such as
historically black colleges and universities, Hispanic-serving
institutions, and medical schools in Puerto Rico.14,15

One opportunity that cannot be overstated for virtual re-
cruitment is the mitigation of financial hurdles to becoming a
neurologist. Most fourth-year medical students spend be-
tween $1,000 and $5,000 on residency interviews, and more
than 20% of students spend >$5,000.27 Therefore, the switch
to virtual interviews abrogates one of the most common fi-
nancial barriers to medical student applicants. This is espe-
cially helpful for students who are UIM because they are more
likely to carry student debt and less likely to have financial
security and resources available for interviews.29,30 The ability
to successfully match to a residency program should be based
on academic merit and holistic value, not the financial ability
to navigate the interview process.

Recommendations
First, programs should maintain robust outreach programs,
with a focus on minority applicants. Programs should send
representatives virtually to SNMA and LMSA conferences, and
participate in virtual residency showcases aimed at recruiting
and supporting UIM students.26 Multi-institutional educational
seminars should continue, showing unity throughout our spe-
cialty. We encourage programs to use social media actively
and professionally. Social media is a valuable tool for outreach
toward UIM applicants, and in the absence of in-person ex-
giences, social media helps to convey a flavor of both the
location of the program and resident experiences. Groups such
as the #NeuroTwitterNetwork provide a centralized means of
accessing perspective neurology trainees, whereas other groups
such as #BlackInMedicine, #LatinxInNeuro, #DiversityInMe-
dicine, and @Neuro_Equity offer even more direct access to
important populations.31

Next, we recommend revising interviewee selection and rank
list creation, removing cutoffs for USMLE test scores or Alpha
Omega Alpha membership. Instead of such heuristics, pro-
grams should develop new ways to evaluate the totality of an
applicant’s experience, resilience, knowledge, professionalism,
enthusiasm, and willingness to work. There is evidence of
reduced racial discrepancy in interview offers by eliminating a
USMLE Step 1 cutoff score20 and of increased diversity in
interviews and residency classes by initiating a holistic review
process, focusing on applicants’ diverse life experiences and
commitments to the underserved.11,32 These measures ensure
that qualified candidates are not “screened out” based on
outdated metrics and biased admissions policies. Every ap-
plication should be reviewed, and programs should move
toward a mission-aligned selection process to promote equity.

Table Key Recommendations to Maximize Inclusiveness
and Diversity in Virtual Recruitment

Increase intentional outreach
• Leverage social media to highlight program’s strengths, resident
  experiences, and life in program’s location
• Participate in virtual conferences and exhibits from minority medical
  student associations
• Create virtual rotations for UIM medical students
• Host virtual open houses and networking events

Minimize bias in reviews and evaluations
• Eliminate score cutoffs and application filters
• Adopt a holistic application review and ranking process
• Provide implicit bias training to interviewers and application reviewers
• Develop structured interview guides

Create inclusive virtual interview environments
• Adopt accessible videoconferencing platforms
• Allocate time and resources for technology testing and troubleshooting
• Highlight program’s commitment to diversity and ongoing efforts to
  ensure an inclusive environment
• Engage diverse groups of faculty, trainees, and staff during the interview
day
With the move to virtual interviews, many additional opportunities arise to reduce disparity and bias. We recommend that medical schools provide students with a professional virtual background. In addition, medical schools should provide virtual interview training sessions and mock interviews to decrease student anxiety and unfamiliarity with the virtual format, providing feedback on verbal and nonverbal communication. Schools should provide their applicants with suitable space on campus or access to shareable commercial space to help prevent Internet or location insecurity. It is important for interviewing residency programs to use commonly available videoconferencing platforms and provide backup telephone access to interviews in case of Internet malfunction. Programs should have staff available for troubleshooting and must ensure that interviewing faculty does not hold access issues unfavorably on scoring or recounting the interview.

Interviewers and programs should structure interviews with standardized questions to minimize variability. Unstructured interviews have been shown to incorporate bias because interviewers tend to demonstrate preferences for individuals of the same ethnic and gender background. Structured interviews with standardized questions have been shown to correlate with job performance more than unstructured interviews. An alternative to standardized questions would be using multiple mini-interviews, which combine traditional interviews with clinical scenarios and have been found to be a predictor of performance in medical school while also decreasing bias in the interview process. Interviewers should undergo implicit and unconscious bias training. In addition, residency programs that plan to return to in-person interviews should explore hybrid models that offer both virtual and in-person interviews as options to prospective applicants. Programs must ensure that the choice of virtual vs in-person format does not affect applicant scoring or ranking.

Finally, while bearing in mind the risk of burdening faculty with additional diversity tax, a demonstration of faculty and resident diversity through interview panel members, social events, informational pamphlets, and a clear mission statement will be critical to promote inclusivity in the interview season. The Association of American Medical Colleges has published recommendations for virtual interviewing medical students; these can easily be applied as a baseline guide for residency programs.

Lessons learned during the 2021 virtual residency recruitment and interview season have the opportunity to positively affect future generations. An intentional and purposeful virtual approach to recruitment, interviews, and ranking—with a major focus on inclusivity and diversity—has the potential to supplement the traditional interview process in perpetuity. We encourage residency programs and applicants to share challenges and successes during virtual and hybrid application seasons. Removing barriers and increasing diversity will benefit our patients, our profession, and our future (Table).

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Appendix
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