COVID-19 and the Radiology Match: A Residency Program's Survival Guide to the Virtual Interview Season

Jeffers K. Nguyen, BA, Neal Shah, BA, Darel E. Heitkamp, MD, Yasha Gupta, MD

INTRODUCTION

On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a global pandemic. Since then, government agencies have taken significant measures to contain the spread of the coronavirus, imposing aggressive measures such as travel bans and shelters-in-place. While these aggressive efforts have flattened the curve and curtailed the spread of the virus, they have also produced negative collateral effects on the economy and medical education. Tens of thousands of third-year medical students across the United States were abruptly frozen in their progress of choosing and securing medical specialties in which to train after graduation.

Official guidance on medical student activity was released by the Association of American Medical Colleges (AAMC) on March 17, 2020, with recommendations to suspend student participation in direct patient contact [1]. Additionally, the AAMC suspended both student and program access to the Visiting Student Application Service in adherence to broader travel restrictions and social distancing measures. On May 11, 2020, a special work group of the Coalition for Physician Accountability, comprised of numerous stakeholders including the AAMC, the National Resident Matching Program, and the Accreditation Council for Graduate Medical Education, released their recommendations regarding away rotations, in-person interviews, and the Electronic Residency Application Service (ERAS) timeline for this application cycle. Among these recommendations, the work group stated that for the 2020−2021 cycle, all interviews for prospective residents should be conducted virtually [2]. On May 21, 2020, a position statement was released jointly by the Association of Program Directors in Radiology and the Association of Program Directors in Interventional Radiology, which supported the recommendations of the work group, urging all residency programs in diagnostic radiology and interventional radiology to commit to them [3].

Beginning in March 2020, in accordance with social distancing guidelines, the National Board of Medical Examiners (NBME) suspended most licensing exams administered at Prometric testing centers, including Step 1, Step 2 CK, and Step 3. This is anticipated to create a backlog of examinations once testing centers reopen. As a result, residency applicants' Step 2 CK test dates have been pushed as far back as December 2020, well past the deadline for ERAS application submission and most programs' application review.

The impact of COVID-19 on this year's residency interview season will be profound. The move to virtual interviewing means that both students and programs must make ranking decisions without information provided by the in-person interview experience. Programs will need to find a reliable alternative means by which to market themselves and obtain additional information about applicants. The aim of this article, written from the trainee's perspective, is to provide recommendations to radiology residency programs for filling the information gaps created by the rapid transition to virtual interviewing. We feel it is critical for programs to concentrate on three primary areas: (1) establishing an active, online presence as a source of reliable information for applicants, (2) employing additional screening tools to better select applicants for interview, and (3) creating a virtual department visit so that applicants and programs can still discover important information they seek in one another.

PROGRAMS SHOULD ESTABLISH AN ONLINE PRESENCE

Historically, the most important and reliable data used by students to assess residency programs has been obtained at the in-person interview [4]. Verbal and nonverbal information is

processed by applicants at every step of the interview experience, including the pre-interview dinner with residents, the hotel accommodations, the look and feel of the city, the interview presentation, the formal interview sessions, informal conversations with residents, the campus tour, interactions with department staff, and the noon conference experience. Because the in-person interview day will no longer be available, potential sources of program information will now be limited to direct outreach to residents themselves as well as the program websites, ranked two and three in order of importance, respectively [4].

Without the benefit of the interview experience to market themselves and inform students of their programs' strengths, residency directors must now find ways of reaching out to accomplish these tasks. Programs with a social media presence are certainly at an advantage, as they will already have an established platform for outreach [5]. Social media enables two-way communication—both for students to ask questions, and for residents, faculty, and program directors to provide meaningful answers. Specifically, Twitter (Twitter.com, San Francisco, CA) is very effective at promoting and marketing a residency program, allowing for the regular advertisement of departmental achievements such as leadership positions, scholarships, awards, published articles, and presentations at national meetings [4]. This information is crucial for medical students as academic reputation and resident happiness are among the most important factors that medical students consider when ranking programs [4,6]. Programs without social media are losing out on these opportunities for outreach.

While social media may be helpful for understanding how happy residents are at their programs, departmental websites are the primary sources for students to obtain official program information. Unfortunately, a recent study of diagnostic radiology websites revealed that only 55% listed fellowship placement of their residents, and less than 70% described departmental research projects [7]. Worse, nearly one-third of integrated interventional radiology residency programs lacked a dedicated website [8]. Of those that did, only 50% mentioned active research within the department. As students scramble to gather information during this year's virtual interview season, it is imperative that academic radiology departments quickly update their websites with accurate and complete information regarding their educational programs. More than ever before, the information, images, videos, and personal testimony provided on departmental websites will be responsible for shaping student impressions of residency programs.

PROGRAMS SHOULD ENHANCE SCREENING AND INTERVIEWING PROCESSES

Without the luxury of away rotations, in-person interviews, or licensure exam results, programs must innovate new methods of screening and ranking applicants. A 2018 survey conducted by the National Resident Matching Program identified factors most important to diagnostic radiology program directors for selecting applicants to interview. Aside from board-score related metrics, the highest rated factors included prior personal knowledge of the applicant, letters of recommendation in the specialty, the medical student performance evaluation letter, and perceived commitment to specialty [9].

The loss of the away rotation will make it difficult for students to become familiar with and express their interest in programs distant from their home institutions. Additionally, students such as Osteopathic and International Medical Graduates that have traditionally relied on away rotations for gathering letters of recommendation due to lack of home-institutional departments will now be hard-pressed to obtain specialty-specific letters and may have to rely on letters from core rotations. For these reasons, other components of the application, such as the personal statement or volunteer work, may be of more value this application cycle, offering the best insight into a student's personality and commitment to the specialty. As clinical experiences for students will be heterogeneous and limited this year, programs should provide reassurance to students by stating publicly on their department websites that: 1) students will not be penalized for canceled away radiology rotations or sub-internships, and 2) admissions committees anticipate variability in the number and mix of letters of recommendation this application cycle.

Moreover, the cost savings and uncertainty associated with this year's virtual interview season is likely to encourage students to try to interview at more programs than usual, leading to an unprecedented number of applications for most programs. This may create the need for programs to enhance their application screening policies. Care should be taken to screen in a way that does not discriminate against students that have yet to receive their board scores, who are from different geographical areas, or who do not have specialty-specific letters of recommendation. In order to ensure fairness, programs should allow extra time for screening and plan to review a greater diversity of applications this cycle.

Programs that typically require Step 2 CK scores for consideration should forgo these restrictions this year to ensure fairness to students that could not reschedule Step 2 in time. Programs should also consider that many applicants this year will not have the opportunity to demonstrate improvement on Step 2 following a suboptimal Step 1 performance. The prolonged suspension of student activities during the pandemic has affected many vital metrics within the ERAS application that program directors traditionally use to compare applicants, such as clinical rotation experiences, Step 2 scores, and quality of recommendation letters. Programs should seek to level the playing field for student assessment by utilizing alternative screening and interviewing methods, such as holistic application review, supplementary essays, and the multiple mini interview (MMI) technique. Holistic review emphasizes a balanced consideration of applications utilizing a strategic, evidence-based approach, recognizing diversity as an essential component to program success. A short supplementary essay, which would require a writing prompt from programs, would give students control of an additional component in their applications with which they could convey interest,

passion, and creativity. Programs may also choose to put more emphasis on the personal statement this year, as this will be one of the few elements that students truly control.

The MMI involves a number of short interviews, each conducted with a different interviewer. Applicants rotate through each interviewer in a similar setup to an Objective Structured Clinical Encounter or the traditional oral boards [10]. In comparison to a traditional interview, the MMI involves shorter interviews, each with a pre-determined question or topic to be discussed. With shorter interview lengths, programs can schedule more interviews per day using this technique. Assessing applicant responses to the same list of vetted questions may help level the playing field with respect to direct comparison of candidates. With more applicants per program anticipated this year, this technique may help programs cast a wider net and ensure enough ranks to match successfully.

PROGRAMS SHOULD CREATE A VIRTUAL VISITING EXPERIENCE

A study conducted by Phitayakorn et al. in 2015 evaluated factors most of value to applicants when selecting and ranking programs. The results showed that among the five most important factors were resident morale, faculty availability, and faculty involvement in resident training [11]. The avenues by which students are able to gauge these measures have traditionally been the interview day and the away rotation. Without being able to visit programs in person to meet and interact with the residents and faculty, students will not be able to evaluate the criteria that they say they value most.

Successful programs will likely be those that can innovate ways to capture these opportunities and provide them to students online in time for the 2020−2021 interview season. This will mean brainstorming department and residency strengths, devising strategies for how to best market those strengths, and then delivering the digital content to students. One such idea would be to offer "virtual away rotations." Interested radiology applicants could simply join the day-to-day activities of a department using the same web-based platforms currently being used to conduct resident educational conferences, department meetings, and even virtual social gatherings. These electives could offer access to teaching curricula, departmental educational resources, and live sessions with residents to help foster relationships as students seek information about the program and the city.

The American College of Radiology has already taken lead, creating a two-week virtual curriculum that provides medical students with independent required reading assignments, online modules, and online scenarios to incorporate evidence-based strategies for imaging services [12]. Several radiology (Geisel School of Medicine at Dartmouth and Weill Cornell Medicine) and radiation oncology (Stanford University and Ohio State University) programs have followed suit, designing, and piloting virtual rotations for students. These efforts will likely provide programs a recruiting advantage, showcasing their residents, faculty, and program to applicants.

Residency programs could also produce short videos available online to provide the kind of information normally sought by students during the course of the interview experience or away rotation. Well-produced segments featuring residents or faculty addressing important topics such as faculty involvement in education, resident morale, department support of the educational mission, details of the rotation curriculum, and professional development opportunities would likely allow programs to stand out among the competition. Video would also be an effective way to showcase a department's facilities, teaching faculty, residents, campus, and city. Brief messages given by department chairs, program directors, chief residents, and other education leaders would help underscore the program's branding.

Social media platforms such as Facebook (Facebook.com, Menlo Park, CA) and Twitter could also be utilized to highlight a program's educational and innovative initiatives such as resident team building, academic work, and resident awards and achievements. Another idea to help applicants and programs connect is to set up virtual small-group sessions, such as "Zoom happy hours", between a program's residents and students, allowing applicants to ask questions and discuss the kind of topics that would normally get covered during the in-person pre-interview dinner.

CONCLUSION

The COVID-19 pandemic will make the next interview season challenging for radiology residency programs. The suspension of medical students' clinical rotations will lead to great heterogeneity in applications with respect to their clinical experiences, their ability to take United States Medical Licensing Examination, and their success in finding optimal letter writers. The move to virtual interviewing will make it harder for students and programs to learn about one another. Updating department websites and establishing a strong social media presence may be the most crucial way for programs to provide vital program information to students. Utilizing additional unbiased screening measures and increasing manpower will help programs appropriately find and select best-fit applicants. Allowing applicants to visit programs virtually, either through virtual away rotations or the production of high-yield videos will help fill the information gap left by the loss of in-person interviews. Implementing these recommendations is likely to improve outcomes for both applicants and programs during the 2020−2021 interview season and beyond.

DECLARATION OF COMPETING INTEREST

None.

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