Dear Program, What I Wish You Would Do: Applicants' Concerns About and Suggestions for Applying to Surgical Residency During

Cheryl K. Zogg, MSPH, MHS,*†⊠ and Sharon L. Stein, MD, FACS, FASCRS‡\$, 2020-2021 National Medical Student Committee of the Association of Women Surgeons¶

Keywords: COVID-19, ERAS, match, medical student, residency, surgery,

(Ann Surg 2021;273:e85-e87)

he COVID-19 pandemic dramatically changed the progression of medical education for applicants applying to surgical residency this year, including upheavals in clerkship, research, and sub-internship training; cancellation of away rotations; delays and limited access to testing centers; uncertainty about the application process; and related concerns about what it means to do a fourth-year while grappling with virtual interviews and sub-internships, a travel-less match, and the broader reality of the current crisis affecting the world today. Whether interested in general surgery or an integrated operative field, residency applicants and programs are unsure of how best to prepare for and manage this year.

A growing body of literature has attempted to anticipate challenges that surgical applicants might face¹⁻³ and draw from experiences gained through the fellowship match to offer insight from both programs'⁴⁻⁶ and applicants'⁷ perspectives. Nevertheless, despite careful planning and well-intended advice, there remains a dearth of "safe places" in which applicants can make their voices heard. Rapid propagation of programs' presence on social media and the development of virtual offerings ranging from webinars and open houses to attendance of grand rounds and case conferences have forever changed how applicants and programs interact. It has yielded

From the *Chair, National Medical Student Committee, Association of Women Surgeons, Chicago, Illinois; †Yale School of Medicine, New Haven, Connecticut; ‡President, Association of Women Surgeons, Chicago, Illinois; §Division of Colon and Rectal Surgery, University Hospitals, Cleveland Medical Center, Cleveland, Ohio; and ¶Association of Women Surgeons,

⊠cheryl.zogg@yale.edu.

Author contributions: Zogg, Stein, and the 2020-2021 National Medical Student Committee of the Association of Women Surgeons (AWS) made substantial contributions to the conception or design of the work. Zogg, Stein, and AWS participated in the acquisition and analysis of the data. Zogg, Stein, and AWS contributed toward the interpretation of data for the work. Zogg drafted the manuscript, and Stein and AWS critically revised the manuscript for intellectual content. All authors provided final approval of the version to be published and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Cheryl K. Zogg, MSPH, MHS, is supported by NIH Medical Scientist Training Program Training Grant T32GM007205. She is the PI of an F30 award through the National Institute on Aging F30AG066371 entitled "The ED. TRAUMA Study: Evaluating the Discordance of Trauma Readmission and Unanticipated Mortality in the Assessment of hospital quality

Sharon L. Stein, MD, FACS, FASCRS, has received funding from Merck, Sharp & Dohme, and Medtronics.

The authors report no conflicts of interest.

Copyright © 2021 Wolters Kluwer Health, Inc. All rights reserved.

DOI: 10.1097/SLA.00000000000004685

ISŜN: 0003-4932/21/27303-0e85

a variety of responses ranging from excitement and motivation to a sense of obligation and fear of missing out. Although some applicants have embraced the trend, others have intentionally stayed away not wanting to deal with the added stress and distraction as application and interview deadlines loom all while worried that in turning away or in not being active on social media in the first place their opportunity to match will be harmed.

In writing this perspective, we wanted to take a different approach, providing an anonymous forum through which applicants could make their voices heard. Using repeated posts to social media (Instagram and Twitter), emails sent by the professional society to medical student members of the Association of Women Surgeons (AWS), and personal emails forwarded through our network of medical student chapters, the AWS National Medical Student Committee reached out to applicants applying for residency in general surgery or an integrated operative field (including but not limited to: cardiothoracic, vascular, plastics, orthopedics, otolaryngology, ophthalmology, urology, obstetrics and gynecology, and neurosurgery) during the 2020 to 2021 application cycle, asking what applicants wish that programs would do. Between June and September 2020, 468 applicants responded, filling out an anonymous online Qualtrics free-response survey (informed-consent required) that asked:

- "What concerns do you have about applications unique to this
- "What do you wish that programs would do to improve the application process during COVID-19?"

Qualitative thematic analysis of their responses discussing 5 major concerns and an accompanying ranked list of 10 suggestions of things that applicants are looking for from programs is outlined below alongside exemplary quotes. Although primarily intended for the development of educational resources by the AWS National Medical Student Committee during the 2020 to 2021 academic year, respondents were informed that the information they provided would also be shared through published AWS Blog posts and this perspective. The organizational quality improvement project was deemed exempt from review by the Yale Institutional Review Board.

FIVE MAJOR CONCERNS ABOUT APPLYING TO SURGICAL RESIDENCY DURING COVID-19

Lack of Exposure to Surgical Rotations and Patients

- "I am uncertain how to decide if I want to apply to general surgery or an integrated field given limited exposure during my clerkship. I worry that if I dual-apply, my application to general surgery will be overlooked."
- "Coming from a small program, I haven't been able to return to the OR. I am uncertain if I will be able to touch a patient before I apply."

Delays and Changes in USMLE Exams

- "I am a foreign medical graduate who completed medical school last year. I was supposed to be doing research in the US this year while studying for my exams, but I am still at home. Step 1 and Step 2 CK got rescheduled 9 times over the span of 6 months. Step 2 CS was canceled. I am now being asked to take the Occupational English Test from Australia in its place."
- "My medical school is pass-fail during our first 2 years. Clerkships are the only place that we get real grades; those were also changed to pass-fail because of COVID-19. I am concerned about how much weight will end up getting placed on my Step 1 exam, especially after having it canceled multiple times on the day of my test last year."

Demonstrating Interest in a Program/Proving Oneself in the Absence of Away Rotations

- "I am concerned about getting enough/diverse enough letters of recommendation without away rotations. I worry that I will not have the ability to prove myself or present a well-rounded application."
- "I am worried about figuring out how to convince a program that I am interested, especially if I want to do residency in a different part of the country."

Getting an Adequate Feel for a Program

- "I am worried about choosing a program unseen, apart from the 'jazz hands' version presented virtually. I am worried about not having enough knowledge about a program's culture/atmosphere/ vibe to be able to determine 'the right fit."
- "I am concerned about matching into a program in a city/state that I have never had the opportunity to visit. Choosing a place to live for 5 to 7 years is a big commitment, and not being able to physically see a program and 'feel at home' makes me less willing to travel."

Added Nonacademic Obligations in the Midst of COVID-19

- "I am a first-generation, underrepresented-in-medicine (UIM) student feeling stressed because of my family's financial concerns due to layoffs caused COVID-19 and civil unrest around the country. Both situations have required substantial time away from my studies."
- "My parents got sick, and my father died. I know that it affected my performance and scores."

TEN THINGS THAT APPLICANTS ARE LOOKING FOR FROM PROGRAMS

- 1. Be transparent in what you are looking for and the factors that I am being evaluated on.
- 2. Be holistic in your evaluation of me, especially this year. Recognize my extracurriculars, research, teaching, development of educational initiatives, and community involvement. Recognize that due to the reality of my current situation, I might not have had that chance.
- 3. Give me a way to show you that I am interested in your program.
- 4. Limit regional and institutional bias in your interview invitations.
- 5. Provide an explanation of the structure of your virtual interview day in advance so that I can prepare.
- 6. Create opportunities for 1-on-1 interactions during your virtual events/interview day instead of relying on entirely groupbased experiences where often only the loudest voices are heard.

- 7. Do more than holding virtual webinars, townhalls, and subinternships. Although helpful, the polished version of you is not
- 8. Give me an opportunity to talk with residents in a space where I can ask honest questions, go on virtual hospital and community tours, and learn about the accomplishments of your graduating/ chief-resident class.
- 9. Consider putting together a video of your program to help me get a better feel of the culture.
- 10. Do not judge me by whether or not I was able to attend (all of) your virtual events.

Moving Forward From Here

Every applicant has their own story, marked by its own journey into surgery and through the perils of applying for surgery in the midst of COVID-19. In setting out to collect and analyze these responses, we, much like the applicants who willingly shared their stories, were uncertain of what to expect. We hoped that in giving voice to the suggestions and concerns that applicants might otherwise be hesitant to share, we could help both applicants and programs succeed.

What we found was a complicated, at times heart-wrenching, and overall inspiringly resilient story of a young generation of future surgeons embarking on the first major step of their surgical careers. Through their responses, applicants acknowledged the realities of the challenges they face and provided useful insight on how we as a professional society should proceed. They enabled us to improve our student outreach, including the development and expansion of UIM mentoring resources; creation of a bi-monthly research methods series; establishment of quarterly membership outreach webinars designed and hosted by our regional representatives addressing topics within their regions that they see; and ongoing development of additional resources framed around topics related to mentorship,8 trainee well-being, 9,10 and surgical skills potentially missed while dealing with the consequences of COVID-19.9,10 Building on the positives of a virtual match, including reduced financial burdens, theoretically more equal access to programs, increased availability of programs on social media, and forcibly learned opportunities for creativity, we encourage programs to take heed and work with applicants to continue addressing the issues unique to applying to surgical residency during COVID-19.

ACKNOWLEDGMENT

We would like to extend a special thanks to Shan S. Lansing, MS (The Ohio State University College of Medicine, Columbus, OH), Lena E. Trager, BA (University of Minnesota Medical School, Minneapolis, MN), Nensi M. Ruzgar, BHSc (Yale School of Medicine, New Haven, CT), Hannah S. Thomas, MSc (University of Edinburgh School of Medicine, Edinburgh, United Kingdom), Mary A. Siki, BS (Tulane University School of Medicine, New Orleans, LA), Kayla B. Hicks, BS (Case Western Reserve University School of Medicine, Cleveland, OH), Elizabeth E. Wicks, BA (University of Mississippi School of Medicine, Jackson, MS), and Camila R. Guetter, MD (Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; Federal University of Parana, Curitiba, Brazil), for their support in the conception and design of this work.

REFERENCES

- 1. Gabrielson AM, Kohn J, Sparks H, et al. Proposed changes to the 2021 residency application process in the wake of COVID-19. Acad Med. 2020;95:1346-1349.
- 2. Gabrielson AT, Kohn TP, Clifton MM. COVID-19 and the urology match: perspectives and a call to action. J Urol. 2020;204:17-19.
- 3. Aiyer A, Granger C, McCormick K, et al. The impact of COVID-19 on the orthopaedic surgery residency application process. J Am Acad Orthop Surg. 2020;28:e633-e641.

- 4. Vining CC, Eng OS, Hogg ME, et al. Virtual surgical fellowship recruitment during COVID-19 and its implications for resident/fellow recruitment in the future. Ann Surg Oncol. 2020;27:911-915.
- 5. Day R, Taylor B, Bednarski B, et al. Virtual interviews for surgical training program applicants during COVID-19: lessons learned and recommendations. Ann Surg. 2020;272:e144-e147.
- 6. Jones RE, Abdelfattah KR. Virtual Interviews in the era of COVID-19: a primer for applicants. J Surg Educ. 2020;77:733-734.
- 7. McKinley SK, Ven Fong Z, Udelsman B, Rickert CG. Successful virtual interviews: Perspectives from recent surgical fellowship applicants and
- advice for both applicants and programs. Ann Surg. 2020 [Epub ahead of print].
- 8. Rodoni BM, Eyrich NW, Fessell DP. COVID-19 & the residency match: the added importance of mentoring. *Ann Surg.* 2020;272:e151–e152.
- 9. Daodu O, Panda N, Lopushinsky S, et al. COVID-19 considerations and implications for surgical learners. Ann Surg. 2020;272:e22e23.
- 10. Blanco-Colino R, Soares AS, Kuiper SZ, et al. Surgical training during and after COVID-19: a joint trainee and trainers manifesto. Ann Surg. 2020;272:e24-e26.