

Letter: Impact of Sub-Internship Cancellations in Neurosurgery During COVID-19

To the Editor:

With the dramatic shifts in portfolio preparation for aspiring neurosurgeon-scientists amid COVID-19, we aimed to discuss potential ramifications of subinternship cancellations on the neurosurgery residency application process in the wake of the pandemic and beyond.

On April 29th, 2020, the Society of Neurological Surgeons (SNS) released a statement declaring that all external medical student rotations – including “Sub-internships” – will be deferred in light of the coronavirus disease 2019 (COVID-19) pandemic.¹ The SNS Executive Council suggested that students interested in applying to neurological surgery residencies for the 2020-2021 cycle should complete 2 rotations (8 wk) in neurosurgery at their home institutions (or with the nearest Accreditation Council for Graduate Medical Education [ACGME] accredited program for students lacking a home program).¹

The latest release from the SNS highlights both the proactive response of medical leaders to manage the ongoing pandemic and the new challenges facing medical students aspiring toward a career in neurosurgery. Subinternships play a significant role in applicant and program selection decision-making processes, especially for a profession which places a great value on intangibles: personalities and program dynamics vary, and away rotations help ensure that these variables align. For residency programs, away subinternships are akin to “try-outs” in athletics: they provide superiors with the opportunity to evaluate individuals on their early clinical prowess, work ethic, character, and fit for the team with whom they could spend the next 7 yr.

In addition to the challenges that subinternship cancellations place on the program selection process, mitigatory pandemic protocols will also certainly challenge medical students facing career-planning decisions. For example, the next wave of incoming neurosurgery residents may have limited exposure to neurosurgery outside of their own institution. Students will lack exposure to the clinical variation among different programs, as patient demographics, geographic characteristics (urban vs rural settings), practice patterns (exposure to endovascular neurosurgery and functional neurosurgery opportunities), and clinical research (most often frequently associated with variations in National Institutes of Health funded projects) can vary significantly across programs.²

Moreover, even slight differences in program size (1-5 residents/year) can engender large variations in factors ranging from overall program culture to call schedule, surgical workload, and research expectations. Away rotations afford medical students' exposure to these program variations across a variety of clinical settings and help formulate their preferences for residency training. Without this option, the next cohort of first-year

residents could be faced with a steep learning curve or worse yet – higher rates of dissatisfaction – come residency. For a specialty with a relatively high attrition rate,³⁻⁶ these unprecedented dynamics could pose significant challenges.

Ultimately, changes arising from the COVID-19 pandemic mirror a fundamental shift in medical education and training which will continue to generate unique challenges for medical students interested in pursuing the subspecialty of neurosurgery.⁷⁻¹⁰ For 2021, the ACGME will be faced with the unique challenge of implementing protocols that can optimize the residency selection process while also being mindful of COVID-19 safety guidelines.


Funding

This study did not receive any funding or financial support.

Disclosures

The authors have no personal, financial, or institutional interest in any of the drugs, materials, or devices described in this article.

Chidinma M. Wilson, BA, BS *

Nolan J. Brown, BS ‡

Donald K. E. Detchou, BA *§

*Perelman School of Medicine

University of Pennsylvania

Philadelphia, Pennsylvania, USA

‡University of California, Irvine School of Medicine

Irvine, California, USA

§Frazier Scholar Program

Department of Neurosurgery

Hospital of the University of Pennsylvania

Philadelphia, Pennsylvania, USA

REFERENCES

1. SNS. *Society of Neurological Surgeons Policy on External Medical Student Rotations during the COVID-19 pandemic*. 2021. <https://www.societyns.org/Assets/b97134f4-54f2-4954-90c5-dc2069192f73/637238368165230000/sns-policy-on-external-medical-student-rotations-during-the-covid-19-pandemic-final-pdf>. Accessed April, 2021.
2. Gephart MH, Derstine P, Oyesiku NM, et al. Resident away rotations allow adaptive neurosurgical training. *Neurosurgery*. 2015;76(4):421-426.
3. Agarwal N, White MD, Pannullo SC, Chambless LB. Analysis of national trends in neurosurgical resident attrition. *J Neurosurg*. 2018;131(5):1668-1673.
4. Wadhwa H, Shah SS, Shan J, et al. The neurosurgery applicant's “arms race”: analysis of medical student publication in the Neurosurgery Residency Match. *J Neurosurg*. 2019;1:1-9.
5. Yaeger KA, Munich SA, Byrne RW, Germano IM. Trends in United States neurosurgery residency education and training over the last decade (2009–2019). *Neurosurg Focus*. 2020;48(3):E6.
6. Limoges N, D'Agostino E, Gelinne A, et al. Pediatric neurosurgery training during residency in the United States: a program director survey. *J Neurosurg Pediatr*. 2020;26(1):6-12.

7. Oyesiku NM. Esse quam videri. *Neurosurg Open*. 2021;2(2):okab002.
8. Bray DP, Oyesiku NM, Howard BM. Improvise, adapt, and overcome. *Ann Surg*. 2021;273(1):e5-e6.
9. Saad H, Alawieh A, Oyesiku N, Barrow DL, Olson J. Sheltered neurosurgery during COVID-19: the Emory experience. *World Neurosurg*. 2020;144:e204-e209.
10. Burke J, Chan A, Mummaneni V, et al. Letter: the coronavirus disease 2019 global pandemic: a neurosurgical treatment algorithm. *Neurosurgery*. 2020;87(1):E50-E56.

© Congress of Neurological Surgeons 2021. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com

<https://doi.org/10.1093/neuros/nyab232>
