Neurosurgical Forum LETTERS TO THE EDITOR

Academic and research interest groups in neurosurgery: a smart strategy in times of COVID-19

TO THE EDITOR: We read with great interest the article published by White et al.¹ (White MD, Fox BM, Agarwal N. The COVID-19 pandemic and the inequities of the neurosurgery match. Letter. *J Neurosurg*. 2021;134[4]:1351–1353), in which the authors express their concern regarding the new interview policies for students aspiring to enter neurosurgery programs. The new policies have been adopted due to the current COVID-19 pandemic, and virtual encounters have been chosen that in one way or another sow an inequity among applicants to medical residencies. We thank the authors for their interest in providing optimal and fair conditions to all those aspiring to the specialty of neurosurgery.

The sudden onset of COVID-19 directly and indirectly affected the study and work conditions in the health arena, limiting participation in the hospital field and making it necessary to opt for virtual mechanisms for the exercise of the academic practice—medical clinic. However, and despite the strategies used, the total restriction on attending a care center, whether for university practice or professional practice, has led to disinterest and a decline in academic productivity, especially in undergraduate students.² An alternative to encourage all those students who have not found continuity in their praxis is the interest groups and research academy, in which mentors who are experts in certain topics can encourage the search, appropriation, and dissemination of academic and scientific knowledge. Rallis et al.³ showed that oncology tutoring had a positive impact on educated students by significantly increasing knowledge about multidisciplinary work and oncology-related specialties, including academia and research, even though interest in the tutor's specialty did not develop.² That is why groups should be open to the student's interest, in this case, in neurosurgery.

We must bear in mind that the success of this type of project lies in the communication between the mentor and his or her pupils,^{3,4} because arising from there, the quality of the activities that can be carried out is reinforced. Besides, it should be emphasized that this is a dynamic and bidirectional process, where both parties must propose and contribute so that everything is carried out harmoniously, giving space for feedback and constructive criticism.³ Of course, the mentor is the one who must take the

lead in the project, assuming and giving responsibilities to the participants that allow them to succeed at the proposed goal, without forgetting that they have their mentor's help. This process must be holistic and not only focus on the academic part, because among the most fruitful actions on the part of the mentor are the sharing of frustrations and old experiences, the creation of support networks, and providing support in times of crisis.³

Models such as ASPECT (The Accelerate Scholarship through Personal Engagement with a Collaborative Team) promote longitudinal and collaborative research focused on a common research topic, provide tutorials to overcome personal and academic adversities, and provide a forum for students at all academic levels.⁴ This model supports what we have said above regarding the need to cultivate a relationship of friendship between mentor and pupil, beyond just an academic exercise, to enhance the results. The simultaneous participation in multiple projects, the identification and strengthening of the virtues of each member of the team, and the periodic telephone calls in which personal and professional issues are shared are some of the strategies that are used and that have shown good results.⁵ However, this is not the only existing model, just an example of the advantages that a mentoring process has applied in an organized way.

In this way, we invite students to participate in interest groups of academia and research in neurology and neurosurgery, as well as inviting the participation of residents, teachers, and other professionals who may encourage the continuity of the academic exercise, especially in this time of the pandemic, to achieve different objectives but with equally formative value. Although the shared experiences are not unique to the neurosurgery program, they can be applied to it with the certainty that very similar or even better results will be obtained in the context of academic neurosurgery.

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Disclosures

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Response

The COVID-19 pandemic has caused rapid and dramatic changes in the way medical education is administered. These changes have impacted nearly every aspect of the educational process, and the downstream consequences of some of these changes are only now becoming evident. The authors raise concerns regarding the pandemic's effect on medical student interest in neurosurgery, which is particularly important in our field—where interest is often developed, confirmed, and matured in the direct clinical environment. However, necessary restrictions on the clinical environment disproportionately constrain opportunities for medical students. If neurosurgery as a field is going to continue to attract the brightest medical students, there must be a focus on other methods of engaging these students to overcome the decreased opportunity for direct clinical exposure during the pandemic. Specialty-focused interest groups could be one component of the solution to this problem by providing students with mentored academic and research opportunities that can be easily conducted in compliance with pandemic guidelines.¹

Neurosurgical interest groups had been implemented at the medical school level prior to the COVID-19 pandemic,^{1,2} and the success of these programs supports the argument of Miguél-Lapeira et al. that interest groups could prevent some of the negative consequences of students' limited clinical exposure during the pandemic. The Neurological Surgery Interest Group (NSIG) at the University of Pittsburgh School of Medicine is a prime example of how interpersonal engagement with faculty and residents from neurosurgery departments can cultivate interest and productivity among students. The Pittsburgh group published their interest group experience and demonstrated encouraging results.³ Participants in the group produced double-

digit publications in neurosurgical journals, had a 100% acceptance rate of abstracts to the American Association of Neurological Surgeons (AANS) conference 2 years in a row, and, most importantly, had an increased number of students matching into neurosurgery from their institution. Similar success has been noted with other interest groups as well.⁴ Furthermore, many of the group's activities, such as faculty panels, workshops, and networking events, can all be conducted virtually to comply with current restrictions. At the national level, an analysis of institutions with AANS medical student chapters, which function as neurosurgery interest groups, demonstrated that a greater degree of chapter activity at an institution was associated with higher match rates.¹ These results demonstrate the ability of this approach to foster student interest in neurosurgery and promote academic productivity without any requirement for direct exposure to patient care.

The COVID-19 pandemic has created many challenges for neurosurgery as a whole, and these challenges extend all the way to medical students considering and applying to neurosurgery programs. Immediate effects were caused by the cancelation of sub-internships and the transition to a virtual residency interview process. However, more long-term effects are certain, and the authors highlight the importance of not leaving behind students whose interest in neurosurgery is still developing while the field adapts to the current situation. Interest groups in neurosurgery have previously demonstrated success and represent a solution that can function at full capacity while in full compliance with pandemic restrictions. Thus, we agree with the authors' call for a focus on the creation and improvement of interest groups in neurosurgery, and suggest that this effort is certain to have benefits that extend well beyond the pandemic.

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