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Letter to the Editor: Coronavirus Disease 2019 and Resilience: Neurosurgical Perspectives



As the world economy is at a stand-still, and people are practicing social distancing and maintaining life at the bare minimum, it is bound to have an effect on the operational implication of our commonly practiced form of neurosurgery.¹ For the past few months, a substantial decrease has occurred in the performance of elective surgeries owing to the mobilization of hospital staff and equipment to the battle of the pandemic and, needless to say, the fewer trauma cases resulting from the restricted movement of people amidst the lockdown. Because of the critical nature of patients requiring neurosurgery, urgent care has, and shall always be, dispatched worldwide because of the aggressive progression of disorders requiring neurosurgery. Many centers still are practicing under the strict measures of physical protection and quarantine measures. The dwindling supply of personal protective equipment has become a global issue as governments struggle to find this precious material and ensure its proper distribution. The discrepancy in providing personal protective equipment to the surgical staff seems to be greater than that for other staff.²

Many hospitals around the globe have seemingly avoided surgical faculties in maintaining proper quarantine measures. As the number of asymptomatic carriers has increased, the potential for subclinical spread shall increase many times from patients to neurosurgical staff. In our field of neurosurgery, those practicing the art of endoscopic intervention will be more vulnerable to actual contamination. Few of our ear, nose, and throat colleagues have provided substantial evidence of their staff becoming more infected than the staff of other surgical specialties.³ Given the continued infection rate worldwide and the increase in asymptomatic carriers, large effects in the field of neurosurgery can be expected.

The reopening of common out-department patient and fast track healthcare will require time and systemization to maximize both physician and patient protection and minimize the possibility of spread. Our usual method of practice will also require substantial changes. With the use of telemedicine increasing, we will need to use its technologies to bring care to our patients.⁴ Patients can systematically complete a common questionnaire to provide the

directed history we usually seek to explore. In these trying times, we might need to rethink the traditional physical evaluation of patients and its necessity and increase our dependence on radiology and subsidiaries to reach the desired diagnosis. As time progresses, standard neurosurgery will return to its glory days. However, until then, in this period in which resources are limited and elective surgery must be avoided, we must rethink our conventional strategies to battle this pandemic to maintain the limited care we can provide to our patients.

We strongly suggest that physicians stratify patients according to the methods of triage and serve them on an as needed basis.⁵ Limiting patient visits for consultation should continue to be enforced. Things shall and will change for the good and, as proved in times earlier, neurosurgeons will adapt to the needs of the times and those of their patients. We shall bypass the shortcomings and rebuild on a newer base.

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REFERENCES

1. Jean WC, Ironside NT, Sack KD, et al. The impact of COVID-19 on neurosurgeons and the strategy for triaging non-emergent operations: a global neurosurgery study [e-pub ahead of print]. *Acta Neurochir*. <https://doi.org/10.1007/s00701-020-04342-5>, accessed May 5, 2020.
2. Legido-Quigley H, Asgari N, Teo YY, et al. Are high-performing health systems resilient against the COVID-19 epidemic? *Lancet*. 2020;395:848-850.
3. Lo YT, Yang Teo NW, Ang BT. Editorial: endonasal neurosurgery during the COVID-19 pandemic: the Singapore perspective [e-pub ahead of print]. *J Neurosurg*. <https://doi.org/10.3171/2020.4.JNS201036>, accessed May 5, 2020.
4. Hollander JE, Carr BG. Virtually perfect? Telemedicine for Covid-19. *N Engl J Med*. 2020;382:1679-1681.
5. Bajunaid K, Sabbagh AJ, Ajlan A, et al. Consensus statement of the Saudi Association of Neurological Surgery (SANS) on triage of neurosurgery patients during COVID-19 pandemic in Saudi Arabia. *Neurosciences (Riyadh)*. 2020;25:148-151.