ScientificScholar®
Knowledge is power
Publisher of Scientific Journals

www.surgicalneurologyint.com

Surgical Neurology International

Editor-in-Chief: Nancy E. Epstein, MD, Clinical Professor of Neurological Surgery, School of Medicine, State U. of NY at Stony Brook.

SNI: Infection

Editor
Ali Akhaddar, MD, IFAANS
Avicenne Military Hospital, Marrakech, Morocco

SNI
Open Access

Letter to the Editor

A Canadian perspective on coronavirus disease-19 and neurosurgical residency training

Erika D. Leck, Mark A. MacLean, Jacob Alant

Division of Neurosurgery, Dalhousie University, Halifax, Nova Scotia, Canada.

E-mail: *Erika D. Leck - erika.leck@gmail.com; Mark A. MacLean - mark.maclean@dal.ca; Jacob Alant - j.alant@dal.ca

***Corresponding author:**
Erika D. Leck,
Division of Neurosurgery,
Dalhousie University, Halifax,
Nova Scotia, Canada.

erika.leck@gmail.com

Received : 05 May 2020
Accepted : 09 May 2020
Published : 23 May 2020

DOI
10.25259/SNI_250_2020

Quick Response Code:

INTRODUCTION

A novel coronavirus disease (COVID-19) emerged in late 2019 and rapidly spread across the globe.[5] The World Health Organization declared a pandemic in March 2020.[1] The experiences of neurosurgery programs around the world have been reported.[3,4] Herein, we comment on the unique impact on neurosurgical residency training in Canada.

The Canadian experience

The Canadian Health Act guides delivery of health care and is founded on five key principles: public administration, comprehensiveness, universality, portability, and accessibility.[2] Canadian health care is publicly funded and provincially delivered, receiving direction from the federal government. Each province has mandated their own policies regarding social distancing and public restrictions during the pandemic.

Provinces temporarily closed their borders, restricting travel; those returning were required to "self-quarantine" for 14 days. Out-of-town resident electives were cancelled. The Royal College of Physicians and Surgeons of Canada postponed 2020 board examinations. These impacts were felt by residents at the end of their training seeking employment. Travel restrictions have also complicated graduating residents' fellowships plans. Provincial licensing authorities plan to offer temporary licenses to new and graduating residents. At this time, it is unclear how the length of residency training will be impacted.

Resident burnout and safety: psychosocial implications

Resident safety is a top priority. Neurosurgical residents may be redeployed to high acuity settings such as the intensive care unit or emergency departments. It is important that residents feel supported and are supervised. Caring for severely ill patients under resource and time constraints may create a sense of anxiety, with fears of redeployment and working in a field trainees have little experience with. Our neurosurgical resident colleague expressed the following sentiment:

"The uncertainty of being exposed to the virus during day-to-day clinical practice, in the operating room, or bringing the virus home and exposing family and friends, is emotionally burdensome."

Teaching and education

Education is a critical component of neurosurgical residency training, with most programs having protected ½ day teaching sessions. In Canada, weekly case rounds and curriculum presentations were quickly transitioned to online platforms utilizing virtual meeting software. This has allowed our educational curriculum to continue, including monthly morbidity and mortality rounds, journal club, and multidisciplinary team rounds. This has fostered a sense of collegiality within our department.

Consultations

Compared to usual, our neurosurgical consultation volume has decreased. Patients may be attempting to minimize risk of infectious exposure. The impact of social distancing has also been evident in the decreased volume of trauma, with less cars on the road, and less high-risk activities (e.g., use of all-terrain vehicles), cranial and spine trauma rates are down. There are no published data allowing us to infer the effect of social distancing on trauma rates.

Operative cases

Provincial health authorities have cancelled elective surgeries to minimize spread of infection. Policy development is ongoing to clearly define what cases are considered urgent and emergent. Cancelled elective cases will lengthen waitlists and strain the Canadian health care system. Residency training has also been impacted; without elective cases, typical inpatient-related workload has decreased and there is less perioperative management. Moving forward, it may be challenging to allocate operative experience fairly across seniority levels. Adapted learning plans will be required to ensure residents are meeting milestones.

Virtual clinics and telehealth

In Canada, elective clinics were cancelled within days of documented COVID-19 spread. Many clinics are being carried out virtually. Billing codes have been created for telehealth management and expanded to allow care provided by residents, as long as resident and attending physicians are colocated. For residents not on call, these options may allow for ongoing participation and education.

Restructuring of call schedules

Our residency program has transitioned to team-based call scheduling. Two separate teams of residents work 6 days on and 6 days off, with one resident acting as a float. This structure minimizes time spent in hospital and interaction between teams, reducing exposure risk. When a resident becomes sick or must self-isolate, this system incorporates redundancy, allowing others to fill the void. Many programs nationwide have adopted this strategy. Staff physician scheduling is similar.

CONCLUSION

The COVID-19 pandemic has greatly impacted neurosurgical residency. Residents around the world face changes to their education, clinical duties, and operative experience. We welcome responses from other countries, discussing their personal experience, highlighting similarities and differences.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Cucinotta D, Vanelli M. WHO declares COVID-19 a pandemic. Acta Biomed 2020;91:157-60.
2. Infographic: Canada Health Act. Available from: https://www.canada.ca/en/public-health/services/publications/science-research-data/canada-health-act-infographic.html. [Last accessed on 2020 Apr 20].
3. Kim KH, Choi EH, Kim SK. Editorial. COVID-19 outbreak and its countermeasures in the republic of Korea. J Neurosurg 2020:1-2. Doi: 10.3171/2020.4.JNS201062. [Epub ahead of print].
4. Oudrhiri MY, Bechri H, Hakkou EM, Melhaoui A, Arkha Y, El Ouahabi A. Letter: Neurosurgical patients' management during the COVID-19 pandemic-an institutional report from an african neurosurgical center. Neurosurgery 2020:nyaa182. Doi: 10.1093/neuros/nyaa182. [Epub ahead of print].
5. Wu F, Zhao S, Yu B, Chen YM, Wang W, Song ZG, *et al*. A new coronavirus associated with human respiratory disease in China. Nature 2020;579:265-9.

How to cite this article: Leck ED, MacLean MA, Alant J. A Canadian perspective on coronavirus disease-19 and neurosurgical residency training. Surg Neurol Int 2020;11:125.