

Canadian Medical Education Journal

Works-in-Progress

Impact of the COVID-19 pandemic on anesthesia residency education Les effets de la pandémie de la COVID-19 sur la formation des résidents en anesthésie

Jennifer M. O'Brien,¹ Megan Deck,¹ Una Goncin,¹ Malone Chaya¹

¹Department of Anesthesiology, Perioperative Medicine and Pain Management, College of Medicine, University of Saskatchewan, Saskatchewan, Canada

Published ahead of issue: July 20, 2020; published September 23, 2020

CMEJ 2020; 11(5), e126-e128; Available at <http://www.cmej.ca>

© 2020 O'Brien, Deck, Goncin, Chaya; licensee Synergies Partners

<https://doi.org/10.36834/cmej.70457>

This is an Open Journal Systems article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.0>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Introduction

On March 11, 2020, the World Health Organization declared a global pandemic in response to the rapid spread of the novel coronavirus SARS-CoV-2.¹ This declaration prompted accrediting colleges, public health authorities, and universities to release policies directly impacting specialty trainees.²⁻⁴

Resident trainees have expressed anticipatory loss over learning opportunities and qualifying exams, and a desire to continue their training.⁵ They have also expressed anxiety over their safety and that of their loved ones.⁶ Similarly, a qualitative study of internal medicine residents in Toronto during the SARS epidemic identified resident concerns regarding the negative impact on their educational experiences and patient care, personal safety, and emotional well-being.⁷

The clinical role of anesthesia residents during the COVID-19 pandemic has not been well described. As

qualified physicians trained in airway management, some have argued anesthesia residents should be considered essential personnel,⁸ deployed in the event of human resource shortages.^{2,3} Conversely, others have argued that by deploying resident physicians in this environment, decision-makers are not adequately protecting the welfare of the lowest-paid doctors on the front lines given the uncertain supply of protective equipment.⁹

Given the diverse response of Canadian anesthesia residency programs,¹⁰⁻¹² and the lack of a standardized framework for anesthesia residency training during a pandemic, we seek to answer the following questions:

- What are residents' perceptions of the impact of the COVID-19 pandemic on their education?
- What are the strategies taken by different anesthesia programs to involve or not involve residents?

e126

- What are residents' attitudes towards these strategies?
- How many residents were exposed to patients with COVID-19 nationally, if working?

These results may inform the Royal College of Physicians and Surgeons, program directors, and health officials in optimizing anesthesia residency training during future pandemic conditions.

Methods

We propose a mixed- methods study using a short questionnaire and a semi-structured interview with anesthesia residents from across Canada. We developed the survey according to established methodology.¹³ Through review of scholarly literature, news media, and informal conversations with colleagues, we deemed the following themes to be pertinent: personal safety, patient care, education, communication and leadership. We pre-tested the survey with three residents to improve relevance, clarity, and flow of questions.

Survey participants will be recruited through an invitation email with implied consent distributed by their residency program; respondents may indicate their desire to be contacted for a follow up interview. Interviewers will keep field notes for each interview, including impressions, reflections, and pragmatic notes. Interviews will be transcribed, and transcripts returned to participants to add, amend, or delete sections of their transcript as they choose. We encourage anesthesia program directors and residents to contact us to discuss opportunities for collaboration.

Survey responses will be reported in aggregate using descriptive statistics. Interview transcripts will be analyzed using thematic analysis,^{14,15} with the aim of exploring the lived experience of anesthesia residency education in the context of the COVID-19 pandemic. Thematic analysis allows us to examine the ways residents make meaning out of their experiences, and the ways in which these experiences are shaped by policy and context. Themes will be determined primarily based on their contribution to answering the research questions, rather than by their frequency across the dataset. We will create initial codes by highlighting key words and phrases

and by connecting themes in the margin. Through an iterative process, the codes for recurring themes, thoughts, beliefs, experiences, and opinions will be reviewed and revised.

Summary

This national survey of Canadian anesthesia residents will develop our understanding of medical education, safety, and perceptions towards training in the context of the COVID-19 pandemic. Our results may inform the Royal College of Physicians and Surgeons, program directors, and health officials in optimizing anesthesia residency training during future pandemic conditions.

Conflicts of interest: The authors have no conflicts of interest to declare.

Internal scientific peer review: We gratefully acknowledge the internal scientific review provided by Dr. Rob Perverseff MD FRCPC, Executive Director of Education for the Department of Anesthesiology, Perioperative Medicine and Pain Management at the University of Saskatchewan, and for his thoughtful review of this manuscript.

Ethics: This project has been reviewed and approved by the University of Saskatchewan Behavioural Research Ethics Board (ID BEH-1956).

References

1. WHO Director-General's opening remarks at the media briefing on COVID19. March 2020
2. Royal College of Physicians and Surgeons of Canada. *Update on the coronavirus update and impact to the Royal College* [Internet]. Ottawa (ON): 2020 Mar Available from: <http://www.royalcollege.ca/rcsite/documents/about/update-coronavirus-e> [Accessed April 21, 2020].
3. COVID-19 Pandemic Guidance for the Health Care Sector [Internet]. Ottawa: Government of Canada; c2020. Coronavirus disease (COVID-19): For health professionals. Available from: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/covid-19-pandemic>

- [guidance-health-care-sector.html#a323](#) [Accessed April 21, 2020]
4. Nasca TJ. ACGME's early adaptation to the COVID-19 pandemic: principles and lessons learned. *J Grad Med Educ.* 2020 Jun; <http://dx.doi.org/10.4300/JGME-D-20-00302.1>
 5. Gallagher TH, Schleyer AM. "We signed up for this!" – Student and trainee responses to the Covid-19 pandemic. *N Engl J Med.* 2020. <https://doi.org/10.1056/NEJMp2005234>
 6. Persad A. RE: Residents during the pandemic. *CMAJ.* 2020 Apr 1. <https://www.cmaj.ca/content/192/13/E340/tab-e-letters#re-residents-during-the-pandemic> [Accessed April 23, 2020]
 7. Rambaldini G, Wilson K, Rath D, et al. The impact of severe acute respiratory syndrome on medical house staff a qualitative study. *J Gen Intern Med.* 2005;20:381–5. <https://doi.org/10.1111/j.1525-1497.2005.0099.x>
 8. Redford G. "This is what we do": Academic medicine mobilizes to prepare for COVID-19. AAMC. 2020 Mar 6. <https://www.aamc.org/news-insights/what-we-do-academic-medicine-mobilizes-prepare-covid-19> [Accessed April 23, 2020]
 9. Corley J. Doctors in training are dying, and we are letting them down. *Forbes.* 2020 Apr 5. <https://www.forbes.com/sites/jacquelyncorley/2020/04/05/doctors-in-training-are-dying-and-we-are-letting-them-down/#f03730d6cddf> [Accessed April 23, 2020]
 10. Max Rady College of Medicine Department of Anesthesiology, Perioperative and Pain Medicine. *Resident involvement in the treatment of COVID-19 patients* [Internet]. Winnipeg: University of Manitoba Rady Faculty of Health Sciences.; 2020 Mar 27 Available from: https://umanitoba.ca/faculties/health_sciences/medicine/units/anesthesia/fac_staff/13096.html [Accessed April 23, 2020]
 11. Postgraduate Medical Education. *Memo for postgraduate trainees* [Internet]. Vancouver: University of British Columbia. 2020 Mar 31 Available from: <https://postgrad.med.ubc.ca/current-trainees/covid-19-how-is-ubc-faculty-of-medicine-monitoring-the-situation/> [Accessed April 23, 2020]
 12. COVID-19 FAQ's. *Residents working with COVID-19 Cases*; [Internet]. Hamilton: McMaster University Faculty of Health Sciences Postgraduate Medical Education. 2020 Available from: <https://pgme.mcmaster.ca/coronavirus-updates/covid-19-faqs/> [Accessed April 24, 2020]
 13. Burns KEA, Duffett M, Kho M, et al. A guide for the design and conduct of self-administered surveys of clinicians. *CMAJ* 2008; 179: 245-52. <https://doi.org/10.1503/cmaj.080372>
 14. Evans C. Analysing semi-structured interviews using thematic analysis: exploring voluntary civic participation among adults. *SAGE Research Methods Datasets Part 1.* Edited by J. Lewis. 2018. <https://dx.doi.org/10.4135/9781526439284>
 15. Golinski M. Identifying patterns and meanings across the AANA Foundation closed claim dataset using thematic analysis methods. *AANA J.* 2018 Feb. 86(1):27-31