Canadian Medical Education Journal

Works-in-Progress

Virtual care rotation for internal medicine residents during the COVID-19 pandemic

Stage de soins virtuels pour les résidents en médecine interne pendant la pandémie de la COVID-19

Tina Nham,[1] Sahar Tabatabavakili,[1] Ayelet Kuper,[1,2,3] Rebecca Gilman Stovel[1,4]

[1]Department of Medicine, University of Toronto, Ontario, Canada

[2]Division of General Internal Medicine, Sunnybrook Health Sciences Centre, Ontario, Canada

[3]Wilson Centre for Research in Education, University Health Network; University of Toronto, Ontario, Canada

[4]Division of General Internal Medicine, Women's College Hospital, Ontario, Canada

Published ahead of issue: October 5, 2020; published: December 7, 2020

CMEJ 2020, 11(6), e201-e203 Available at http://www.cmej.ca

https://doi.org/10.36834/cmej.70409

Introduction

Some residents were excluded from their rotations during the COVID-19 pandemic to avoid patient exposure since they were medically at higher risk of complications. We implemented an Ambulatory Virtual Care Rotation (AVCR) to enable continuity of training during the pandemic. Despite an increased call for resident telemedicine training[1] and literature describing possible methods[2] and curricula[3] for teaching telemedicine, to our knowledge there is no single widely adopted telemedicine curriculum for physicians. We co-created a novel educational opportunity in virtual care with the same trainees who were participating in the rotation.

Methods

We used a participatory action research (PAR) approach.[4,5] See Table 1. Internal medicine residents on the AVCR were both collaborators and participants. Residents reflected on the rotation and the team problem-solved around the intervention during weekly meetings and improvements were implemented.[6] Residents participated in decision-making throughout the AVCR. Power differentials and potential risks to participating were discussed openly.[6] Results were interpreted and the manuscript written and approved by all.[6]

Residents provided phone, video, and electronic consultations. See Table 2 for details. Most were in the COVID-19 Phone Assessment Centre (CPAC) where patients were screened for COVID-19 infection and recommendations were made regarding testing, decreasing disease transmission, and seeking additional in-person medical care under the supervision of attending physicians from multiple specialties. Residents also provided virtual internal

Correspondence: Rebecca Stovel, 76 Grenville Street, AACU, Toronto, Ontario, M5S 1B2; email: Rebecca.stovel@mail.utoronto.ca

medicine consultations in General Internal Medicine (GIM) clinics.

Table 1. Participatory action research activities throughout the virtual rotation (28 day block).

Date	Participants	Data collection	Action
Day 1	Staff general internist (RS) and internal medicine residents (ST, TN) (individual meetings)	Interactive discussion.	Open discussion about implications of collecting our reflections on the rotation and writing a paper using this data. Discussed potential risks of sharing our personal reflections as identified authors. Authors agreed to take a few days to decide on next steps.
Day 5	RS, TN, ST	Interactive discussion and participant field notes.	All participants agreed to proceed with the project.
Day 10	RS, TN, ST	Interactive discussion and participant field notes.	Participants identified the need for more structured academic sessions; therefore, a journal club was implemented to discuss current relevant research articles regarding COVID-19.
Day 15	RS, TN, ST	Interactive discussion and participant field notes.	Resident participants described better educational opportunities in the GIM clinics therefore subsequent block included additional subspecialty medicine clinics.
Day 28	RS, TN, ST (individual meetings)	Interactive discussion.	Summary of reflections and plans for next iteration of rotation were discussed. Resident participants agreed with proposed rotation improvements.

Learning objectives for the rotation were co-created by residents and faculty and included experiencing different modalities of providing virtual care, using virtual productivity technology, developing skills in virtual patient assessment (including determining the safety of providing care virtually), and appreciating the expertise of diverse specialties.

Table 2. Details and structure of the virtual rotation.

	COVID-19 Phone Assessment Clinic	General Internal Medicine Clinic
Type of consultation	New patients -Telephone consultations	New patients, follow-ups, electronic consultations (via e-mail) -Telephone consultations, video visits, electronic consultations answering questions from family physicians
Source of referral	Self-referral (due to known exposure or being advised to by family physician or employer).	Family physicians from the hospital site and community
Reason for assessment	Concern regarding COVID-19 symptoms and desire to be tested.	Undifferentiated internal medicine problems.
Patients assessed (per half-day, per resident)	Average of 10.	3-4.
Attending Physician Speciality	Family medicine, general internal medicine, radiology, obstetrics, urology, psychiatry.	General internal medicine.

Two internal medicine residents (Post Graduate Year (PGY)-1 and PGY-3) participated in this virtual rotation.

Summary

All learning objectives were met. This rotation was particularly effective at allowing residents to hone history-taking, communication, counselling, and rapport-building skills due the nature of providing care virtually. In the absence of the ability to examine patients or use body language to support interactions, residents learned to ascertain patients'

emotions and build common-ground without the benefit of face-to-face interaction. The rotation provided increased exposure to the wide scope of ambulatory internal medicine, sparking at least one resident's interest in ambulatory care.

The rotation initially focused on COVID-19 care to allow residents to feel part of the solution to the pandemic. During the PAR reflection process, we identified that residents felt that CPAC care was algorithmic and less educational than GIM clinics. To improve the educational experience of the AVCR, we now provide opportunities in virtual subspecialty medicine clinics. For technical reasons, video visits only became a possibility partway through the rotation; and we will be incorporating more for the next iteration. Barriers to implementing virtual care, privacy, legal issues, and payment models were suggested as topics of formal discussion during the rotation; we will be incorporating these topics into a weekly journal club.

Administratively, finding supervisors for residents was challenging. Faculty cited having to learn the novel technology and keep abreast with the ever-evolving COVID-19 knowledge required to supervise as deterrents. Clarifying supervisory expectations for attending physicians can be helpful; nonetheless, getting buy-in from sufficient potential supervisors was only achieved through significant persistence. Notably, the flow of resident supervision in clinical interactions was not different. Patients accepted waiting on hold for case review. Moreover, speakerphone and video telecommunication made engaging in conversations between the attending physician, residents, and patients seamless.

AVCR was a success. The demand for virtual care is increasing, as is the need to educate physicians in these newer models of care.[2] Incorporating novel models of care into residency should be done irrespective of a pandemic in order to build residents' skills for the future and to integrate such 'novel' models of care into everyday medicine.

Conflicts of interest: All authors declare no conflict of interest due to financial or personal relationships that could potentially bias this work.

Funding: There were no funding sources used for this project.

References

1. Nochomovitz M, Sharma R. Is it time for a new medical specialty?: The medical virtualist. *JAMA.* 2018;319(5):437-8. https://doi.org/10.1001/jama.2017.17094

2. Basu A, Seaton P, Kirk R et al. Review of the effectiveness of educational tools for teaching telehealth care 2010, updated May 10. Available from: https://www.academia.edu/2822595/Review_of_the_effectiveness_of_educational_tools_for_teaching_Telehealth_care [Accessed on April 20, 2020].

3. Edirippulige S, Armfield NR. Education and training to support the use of clinical telehealth: A review of the literature. *J Telemed Telecare*. 2017;23(2):273-82. https://doi.org/10.1177/1357633X16632968

4. Meyer J. Qualitative research in health care - Using qualitative methods in health related action research. *BMJ.* 2000;320(7228):178-81. https://doi.org/10.1136/bmj.320.7228.178

5. Lingard L, Albert M, Levinson W. Qualitative research - Grounded theory, mixed methods, and action research. *BMJ* 2008;337(7667). https://doi.org/10.1136/bmj.39602.690162.47

6. Parry D, Salsberg J, Macaulay A. A guide to researcher and knowledge-user collaboration in health research 2013 Available from: https://cihr-irsc.gc.ca/e/documents/Guide_to_Researcher_and_KU_Collaboration.pdf [Accessed on May 6, 2020].