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Effects of the COVID-19 lockdown on Canadian ophthalmologists: a survey

Many health care fields, including ophthalmology, were not equipped to manage the logistical, emotional, and mental stresses of the SARS-CoV-2 (COVID-19) pandemic.¹ Ophthalmologists were required to rapidly adapt to virtual health care delivery, a less efficient way of practice for such a procedure-based specialty. Moreover, a decrease in patient encounters caused financial setbacks for many ophthalmologists. The true impact of the pandemic at both professional and personal levels on Canadian ophthalmologists is unknown.² Consequently, this study investigates the experiences of Canadian ophthalmologists during the pandemic. Understanding these challenges will provide guidance for physicians when traditional services are limited.

A web-based survey was emailed to all members of the Canadian Ophthalmological Society on November 3 and 17, 2020. Survey questions targeted the months March through July 2020 to capture a specific period when ophthalmologists were first adjusting to new COVID-19 health guidelines and restrictions. Responses were collected until December 31, 2020. This study was approved by the Ottawa Health Science Network Research Ethics Board.

A total of 164 responses were collected (14.5% response rate). Demographic and professional characteristics of respondents are displayed in [Table 1](#). Of note, we also performed a subgroup analysis and found no significant differences between subspecialists ([Appendix A](#), available online). Our study results revealed that many ophthalmologists (83.5%) experienced a reduction in workload that negatively impacted patient health outcomes.¹ This unfortunate reality of delayed care highlights the need for well-established telehealth and infection protocols to allow continued health care delivery. Ophthalmologists' decreased workload also was reflected in changes in income across all subspecialties, with 77.4% reporting a 50%–100% decrease, whereas only 7.3% saw no decrease. These financial cuts were an additional stressor to practitioners during these unprecedented times.²

Owing to the pandemic, many ophthalmologists (59.7%) shifted to practicing telemedicine at least a quarter of the time, but only 4.8% reported their experience using telemedicine as “excellent,” and 18.5% reported it as “good.” With varied experiences, it is unclear whether ophthalmologists will continue to use telemedicine after the pandemic. Participants were split, with 33.4% reporting that they would, 42.4% reporting that they would not, and 18.6% unsure. Regardless of ophthalmologist preference, it is likely that this technology will play a role in some practices and will require well-developed infrastructure to do so.³

Table 1—Descriptive statistics for all survey questions

Demographic questions	n (%)	Missing (%)
What is your age?		
<30 years	6 (3.7)	
30–39 years	29 (17.7)	
40–49 years	24 (14.6)	
50–59 years	43 (26.2)	
≥60 years	58 (35.4)	
What is your sex?		
Female	62 (37.8)	
Male	95 (57.9)	
In what province(s) or territory do you work?	65 (39.6)	
Ontario		
British Columbia	30 (18.3)	
Quebec	20 (12.2)	
Alberta	17 (10.4)	
Nova Scotia	12 (7.3)	
Manitoba	6 (3.7)	
New Brunswick	5 (3)	
Prince Edward Island	3 (1.8)	
Saskatchewan	2 (1.2)	
Yukon	2 (1.2)	
Newfoundland and Labrador	1 (0.6)	
Northwest Territory	1 (0.6)	
Where do you practice?		
Urban—suburban	135 (82.3)	
Rural—town	23 (14)	
Prefer not to say	6 (3.7)	
Which level of practice are you currently in?		
Attending physician	150 (91.5)	
Residency	10 (6.1)	
Fellowship	4 (2.4)	
What type of clinical setting do you practice/work in?		
Private practice	108 (65.9)	
Academic hospital	45 (27.4)	
Hospital clinic	6 (3.7)	
Community health centre	2 (1.2)	
Other	3 (1.8)	
Which subspecialty are you practicing or currently training in?		
General	93 (56.7)	
Anterior segment	28 (17.1)	
Cornea	18 (11)	
Glaucoma	37 (22.6)	
Medical retina	21 (12.8)	
Vitreoretinal surgery	11 (6.7)	
Neuro-ophthalmology	15 (9.1)	
Ocular oncology	1 (0.6)	
Oculoplastic surgery	21 (12.8)	
Pediatric ophthalmology	10 (6.1)	
Refractive surgery	9 (5.5)	
Strabismus	7 (4.3)	
Uveitis	15 (9.1)	
Professional impacts of COVID-19 questions		
Which of the following options best reflects your current situation with COVID-19?		8 (4.9)
Asymptomatic and no COVID-19 testing done	102 (62.2)	
Asymptomatic and tested negative for COVID-19	37 (22.6)	
Asymptomatic but was in contact with patient with COVID-19; did not get tested.	5 (3)	
Asymptomatic but was in contact with patient with COVID-19; tested negative for COVID-19.	7 (4.3)	
Asymptomatic but was in contact with patient with COVID-19; tested positive for COVID-19.	0 (0)	
Nonspecific cold or gastrointestinal symptoms but did not get tested.	1 (0.6)	
Symptomatic and tested positive for COVID-19, almost or completely recovered.	2 (1.2)	
Symptomatic and tested positive for COVID-19 and still experiencing moderate to severe health problems from the virus.	2 (1.2)	

(continued)

Table 1—Continued

Demographic questions	n (%)	Missing (%)
How did you practice ophthalmology during the March–July 2020 period of the COVID-19 pandemic?		
Not currently practicing/unemployed	6 (3.7)	
Practicing from home (e.g., telemedicine, video conferencing patients)	38 (23.2)	
Working in clinic setting part time (e.g., emergency cases only)	115 (70.1)	
Working in clinic setting full time	48 (29.3)	
How did your workload change during the March–July period of the COVID-19 restrictions?		8 (4.9)
Decreased	137 (83.5)	
Increased	11 (6.7)	
Stayed the same	8 (4.9)	
What percentage of your monthly income dropped during March–July 2020 owing to COVID-19 restrictions?		8 (4.9)
0	12 (7.3)	
20	17 (10.4)	
50	51 (31.1)	
75	68 (38.4)	
100	13 (7.9)	
What percentage of your work was telemedicine versus face-to-face clinical practice during March–July 2020?		8 (4.9)
Telemedicine 0% of the time	58 (35.4)	
Telemedicine 25% of the time	53 (32.3)	
Telemedicine 50% of the time	17 (10.4)	
Telemedicine 70% of the time	25 (15.2)	
Telemedicine 100% of the time	3 (1.8)	
If you practiced ophthalmology using telemedicine during the COVID-19 pandemic, how has your experience been while using telemedicine?		8 (6.4)
Excellent	6 (4.8)	
Good	23 (18.5)	
Natural	47 (37.9)	
Poor	30 (24.2)	
Very poor	10 (8.2)	
N/A	40	
Do you envision yourself continuing to practice telemedicine beyond the COVID-19 pandemic?		8 (5.6)
Yes	48 (33.4)	
No	61 (42.4)	
I do not know	27 (18.6)	
N/A	20	
In your experience, how did the COVID-19 pandemic impact the Canadian ophthalmology community?		8 (4.9)
Brought it closer than before	54 (32.9)	
Distanced the community apart	43 (26.2)	
Stayed the same	59 (36)	
Personal impacts of COVID-19 questions		
Including yourself, how many individuals lived in your residence from March to July 2020?		13 (7.9)
0	2 (1.2)	
1	18 (11)	
2	43 (26.2)	
3	26 (15.9)	
4	38 (23.2)	
4–5	1 (0.6)	
5	12 (7.3)	
6	8 (4.9)	
7	3 (1.8)	
From March to July 2020, who was living in your residence?		
Children	89 (54.3)	
Spouse	129 (78.7)	
Parent	5 (3)	
Sibling	4 (2.4)	
In-law	3 (1.8)	
Roommate	4 (2.4)	
Lived alone	13 (7.9)	
Prefer not to disclose	5 (3)	
During the COVID-19 restrictions from March to July 2020, how much free time did you feel you had compared with before the pandemic?		10 (6.1)

(continued)

Table 1—Continued

Demographic questions	n (%)	Missing (%)
More	114 (69.5)	
Less	24 (14.6)	
Same	16 (9.8)	
How would you rate your stress levels during March–July 2020 compared with before the pandemic?		10 (6.1)
Much higher	46 (28)	
Higher	62 (37.8)	
No change	23 (14)	
Lower	18 (11)	
Much lower	5 (3)	
How would you rate your overall mental health from March to July 2020?		10 (6.1)
Excellent	18 (11)	
Very good	62 (37.8)	
Fair	58 (35.4)	
Poor	15 (9.1)	
Very poor	1 (0.6)	
How has COVID-19 affected your personal relationships?		10 (6.1)
Mostly positively affected my relationships	50 (30.5)	
Mostly negatively affected my relationships	25 (15.2)	
No change	79 (48.2)	
Did you engage in physical activity from March to July 2020?		10 (6.1)
Always	41 (25)	
Very often	55 (33.5)	
Sometimes	34 (20.7)	
Rarely	20 (12.2)	
Never	4 (2.4)	
The pandemic changed me in the following sense:		
Made me more patient	34 (20.7)	
Made me more creative	41 (25)	
Made me more depressed/stressed	66 (40.2)	
Made me see life in a whole new way	66 (40.2)	
Made me appreciative and grateful	93 (56.7)	

There was a wide range of personal and psychological impacts of COVID-19 on Canadian ophthalmologists. Although 69.5% of ophthalmologists reported having more free time during the period March–July 2020, 28% and 37.8% reported having “much higher” or “higher” stress levels, respectively. One comment highlighted a few of the pertinent stressors at the time: “Multiple sources of stress . . . COVID protocols, office issues, poor remuneration, no holiday time, telephone care of patients, etc.” (See Appendix B, available online, for additional comments that represent the mixed feelings ophthalmologists had toward the pandemic.) Given that practitioner well-being directly affects patient care, this is a worrisome finding.⁴ It is therefore important for strong employee wellness programs to prevent and mitigate burnout, including but not limited to promoting a healthy work environment, discussion groups, and mindfulness training.⁴

Our study had a relatively low response rate, likely because participation was voluntary. Moreover, survey studies, especially those distributed digitally, are prone to sampling biases.⁵ Nevertheless, it has been argued that the representativeness of the population may be more important than the response rate.⁶ Our study participants are representative of Canadian ophthalmologists, that is, mainly from

Ontario (39.6%) and working in private practice (66%) and urban–suburban areas (82%).

This is the first study that looks at the impacts of COVID-19 on Canadian ophthalmologists both professionally and personally. It identifies challenges and areas of improvement and serves as a meaningful learning opportunity for all physicians.

Supplementary Materials

Supplementary material associated with this article can be found in the online version at doi:[10.1016/j.jcjo.2022.06.022](https://doi.org/10.1016/j.jcjo.2022.06.022).

Zina Fathalla,* Emaan Chaudry,* Mino Aminnejad,†
Forough Farrokhyar,† Danah Albreiki*

*Faculty of Medicine, University of Ottawa, Ottawa, Ont.;

†Department of Surgery, McMaster University, Hamilton, Ont.

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Correspondence to:

Zina Fathalla, MDc; zfath016@uottawa.ca.

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Footnotes and Disclosure

The authors have no proprietary or commercial interest in any materials discussed in this article.