

Experiences from a national webinar with recently matched Canadian ophthalmology residents for medical students



Canadian medical students interested in ophthalmology must participate in the Canadian Residency Matching Service (CaRMS) R-1 match,¹ where they are assessed based on their academic and extracurricular profile (such as medical school performance record, custom résumés, volunteerism, leadership, research, reference letters, personal letters, and interviews) before they enter residency training. The most recent residency application cycle, completed in April 2021, brought medical students unique challenges secondary to the coronavirus disease 2019 (COVID-19) pandemic, such as canceled visiting electives, virtual interviews, limited clinical exposure, and limited in-person interaction with program faculty and residents.² Given mounting student concerns about how they may be accurately assessed by residency programs, there has been a rise in virtual events aimed at mitigating these challenges.³

Previous studies report that medical students interested in ophthalmology value opportunities to gain exposure to programs and network with residents.³ Networking and mentorships are important to medical students, impacting their journey into the specialty area they chose as a lifelong career.⁴ We developed a nationwide webinar for medical

students with recently matched ophthalmology residents so that medical students could gain insight about the CaRMS process during this unique application cycle and learn about their recent peers' experiences. Similar postresidency match events have been done in the past in other countries or specialties, but this is the first event of its kind for Canadian medical students interested in ophthalmology.⁴

A quality-improvement study surveying medical student attendees of the post-CaRMS webinar was developed to gain insight into the event's utility and the participants' perceptions about the 2021 CaRMS match. The following commentary describes the organization of the event and survey results.

Before the virtual event, the Canadian Ophthalmology Student Interest Group (COSIG, www.cosig-gecio.com) hosted a post-CaRMS talk on June 9, 2021, during which 16 incoming residents from 7 Canadian medical schools volunteered to share their insights on completing the CaRMS process this year. All speakers successfully matched into a Canadian ophthalmology residency program, with representation from 12 of 16 programs. Most incoming resident physicians (70%, 11 of 16) matched to a different institution than where they completed medical school.

The event registration form was promoted from May 14, 2021, to June 7, 2021, through the COSIG social media pages: Twitter (1858 impressions, 160 engagements), Facebook (>1000 people reached, 171 post clicks), and Instagram (277 impressions, 190 people reached). COSIG

Table 1—Main topics of interest of medical students in a national panel of recently matched Canadian ophthalmology resident physicians

1. <i>Journey to Ophthalmology</i>	Discovering ophthalmology: how and when did they get interested in ophthalmology? Were there any relevant curricular, clinical, or research exposures that allowed them to discover the specialty? Ophthalmology as a microsurgical specialty: how do you know if you have the dexterity to perform microsurgery?
2. Application process	Ophthalmology as a competitive specialty: how many ophthalmology programs did they apply to? Did they parallel plan? Obtaining letters of reference: did they use letters from ophthalmologists only? What was the ratio of research versus clinical letters of reference that they would recommend? Preparing for interview: how was the virtual format? Which programs conduct interviews in French and English? Were there opportunities for networking during the interview season?
3. Electives	COVID-19 challenges: how many weeks of ophthalmology electives did they take? If they were not under special circumstances (coronavirus disease 2019), would they have tried to get the maximum number of weeks (8 weeks as per the electives cap)? How to deal with not having an on-site ophthalmology elective? Other electives: would they recommend the typical electives related to ophthalmology (e.g., plastic surgery, rheumatology, neurology, endocrinology, otolaryngology)? Would they rather recommend electives that genuinely interest applicants even if they are not directly related to ophthalmology (e.g., public health, family medicine)? Parallel planning: what would be the pros and cons of taking another 8 weeks of electives in another specialty, and would they recommend it?
4. Curriculum vitae	Experience before medical school, ranging from premed (CEGEP and (or) preparatory year in Quebec) to graduate studies: what experience did they deem relevant to include on their custom résumés? Research: how many projects did they work on? Were they all related to ophthalmology? How many presentations and papers did they have? Importance of other extracurriculars: how valuable are advocacy efforts? How about other passions, such as music, art, and sports?
5. Plans if going unmatched	From the perspective of those who were unmatched during a year, Do they regret their initial choice of only applying to ophthalmology? What did they do during their unmatched year (e.g., research, master's degree, more observerships, other work)? What do they think made them successfully match this year and not last year? Did they parallel plan during the second iteration?
6. Choosing a rank list	Uniqueness of each program: what makes the program they matched to a great program (e.g., the city, teaching, research, global health, community outreach, small versus large)? Other things considered when making the rank list: couples match, proximity to family and friends, familiarity with the program.

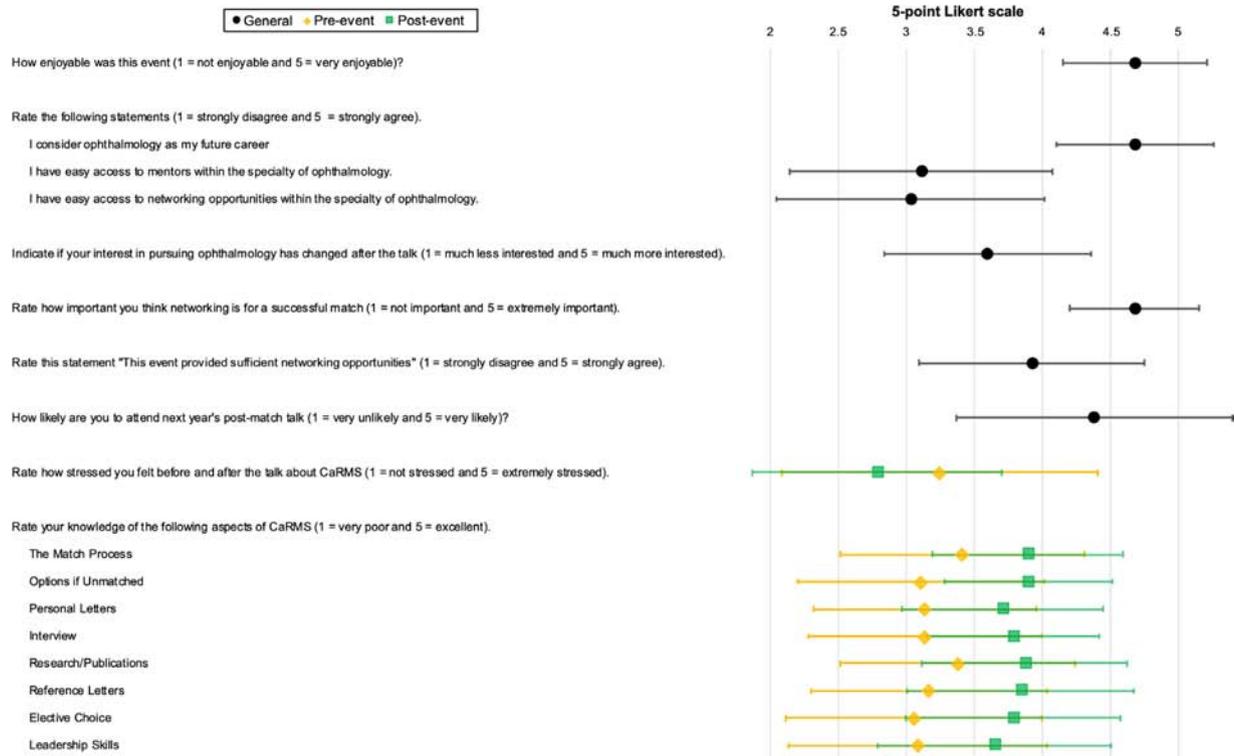


Fig. 1—Results of the postevent survey.

representatives from 16 Canadian medical schools promoted the event at their medical school groups and local ophthalmology or surgery student interest groups. There were 165 unique registrants out of the 188 responses.

During the event, of 165 registrants, 112 unique participants connected to the live Zoom event. In the large group setting, each resident physician introduced himself or herself and shared impressions of the CaRMS process or an exceptional detail of his or her application. For example, resident physicians shared their experiences completing research prior to matching or matching to institutions other than where they completed medical school.

Students were then placed in small groups roughly sorted by year of medical training and rotated through 3 breakout rooms with 1–2 incoming resident physicians for 20 minutes each. There were no prepared presentations; rather, the session consisted of questions asked by the students about the various residency programs and the virtual CaRMS process. The main themes of the questions asked by students are summarized in Table 1. Resident physicians typically answered between 5 and 10 questions per room.

After the event, all participants were invited to fill a post-event questionnaire that included demographics and questions on a 5-point Likert scale. Of the 112 participants, 37 completed the form (33% response rate). Surveys have inherent design limitations and confounding biases associated with the fact that respondents may not actually respond in the same manner they would outside the survey.⁵ This

response rate limits the generalizability of these results to the broader population and may be subject to a response bias but is in keeping with surveys of similar cohorts.^{3,5} Twenty-seven participants (73%) strongly consider ophthalmology as a future career, 8 (21.6%) consider it, and 2 (5.4%) are undecided. Only 3 participants (8.1%) strongly agree that they have easy access to ophthalmology mentors, and 2 (5.4%) strongly agree that they have easy access to ophthalmology networking opportunities. The interest of participants in pursuing ophthalmology slightly increased after the talk, with almost half the respondents indicating that they were either slightly more interested (35.1%) or much more interested (13.5%).

After the event, the 37 respondents gained more knowledge regarding the CaRMS process (the match process, options if unmatched, personal letters, interview, research, reference letters, elective choice, leadership skills), as shown in Fig. 1. They were also less stressed about CaRMS: the pre-event mean score was 3.24 (standard deviation [SD], 1.16), which decreased to 2.78 (0.92) after the talk.

Overall, the event was a success, with the average respondent rating it as being enjoyable to very enjoyable (average, 4.68; SD, 0.53) and indicating that he or she is “likely” to “very likely” to attend next year’s post-CaRMS match talk (average, 4.38; SD, 1.01). Additionally, attendees felt that the event provided networking opportunities (average, 3.92; SD, 0.83), which they appreciated was an important part of the CaRMS application process (average, 4.68; SD, 0.47).

In conclusion, a national student interest group for Canadian medical students interested in ophthalmology was able to successfully organize a nationwide networking session with excellent reported participation of recently matched Canadian ophthalmology resident physicians. Overall, attendees had a positive experience and reported an increase in their knowledge of many aspects of the residency application process. Disseminating information through virtual venues also may increase equity among applicants. It provides universal access to mentors, networking, and valuable knowledge from students who recently completed the match. The event is especially critical for students at universities without an ophthalmology residency program and without existing connections to ophthalmology and medicine. As students increasingly use online platforms to interact with and learn about residency programs, we believe that there is value in hosting these events to meet the need for information and networking.

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Footnotes and Disclosure

Anne Xuan-Lan Nguyen, Daiana-Roxana Pur, and Cody Lo are part of the executive committee of the Canadian Ophthalmology Student Interest Group (COSIG). Isabelle Hardy is the department chair of the University of Montreal ophthalmology program. Chloe Gottlieb is the program director of the University of Ottawa ophthalmology residency program and vice chair of education in the department of ophthalmology at the Ottawa Hospital.

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Cotton-wool spots in patients with migraine



Cotton-wool spots (CWSs) refer to localized accumulations of axoplasmic debris in the retinal nerve fibre layer that result from interruption of ganglion cell axon organelle

transport.¹ The histologic hallmark is the cytoid body, which represents the terminal swelling of a disrupted ganglion cell axon that has expanded and accumulated mitochondria and other organelles and subcellular material.¹ In an otherwise healthy person, even a single CWS is considered abnormal, and it is recommended that investigations for underlying systemic disease be initiated.^{1,2} Migraine is

Table 1—Details regarding the 4 patients with cotton wool spots attributed to migraine

Factor	Patient 1	Patient 2	Patient 3	Patient 4
Age (years)/sex	30/F	40/M	38/M	27/F
Previous migraine diagnosis?	Yes	Yes	No	Yes
Duration of migraine	10 years	22 years	N/A	14 years
Duration of scotoma	1 day	9 days	N/A	7 days
Affected eye	Right	Right	Left	Left
Visual acuity (affected eye)	20/20	20/20	20/20	20/20
IOP (mm Hg, affected eye)	15	15	18	13
Humphrey 24-2 SITA Fast VF	Normal	Normal	Normal	Normal
Location of CWS	Superior to disc	Superior to macula	Superior to macula	Superior to disc
Medications	OCP	None	None	OCP
Presenting blood pressure	114/76	119/82	124/82	95/63
Extensive workup	Negative	Negative	Negative	Negative

IOP = intraocular pressure; VF = visual field; OCP = oral contraceptive pill; CWS = cotton wool spot.