



Short Communication

Dynamic changes in medical education amidst the COVID-19 pandemic: Adapting to virtual ophthalmology residency interviews

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The COVID-19 pandemic has necessitated widespread change to undergraduate medical education. The American Association of Medical Colleges (AAMC) released a statement discouraging in-person away rotations unless the student lacks access to clinical experience in their specialty of interest at their home institution or requires an away rotation to fulfill graduation requirements [1]. This recommendation to adopt virtual platforms spread to the residency application front: the Association of University Professors of Ophthalmology enacted a policy requiring all ophthalmology residency interviews to be conducted on a virtual platform for the 2020–2021 cycle, which has been updated to include the 2021–2022 cycle, as well [2]. Away rotations have traditionally provided applicants an opportunity to demonstrate medical acumen, work ethic, and teamwork capabilities, as well as receive external letters of recommendation. These rotations are associated with match success and are often pursued by students applying to competitive specialties such as ophthalmology [3,4]. While many institutions had grand rounds, lectures, and journal clubs available on web-based platforms prior to COVID-19, suspension of surgical training posed a unique threat to medical education [5]. In lieu of in-person clinical rotations or sub-internships, one educational development tool that has been created is a virtual simulated internship experience, a virtual bootcamp designed to ease the transition to internship year [6]. Recruitment events may also include virtual open house opportunities that utilize online platforms to afford students the opportunity to ask the program questions (see Fig. 1).

The loss of in-person interactions between applicants and programs is novel. The purpose of this study was to determine how ophthalmology residency programs across the United States have responded to the limitations for in-person events through increased online and social-media opportunities.

An official list of ophthalmology residency programs in the United States (118) was compiled using the San Francisco (SF) Residency and

Fellowship Match Services [7]. Social media accounts on Twitter, Instagram, and Facebook for each residency program or department were identified using the Google search engine. Date of creation for accounts and virtual opportunities listed were recorded. The dates of account development were obtained from the account pages of each respective account. Virtual opportunities were identified as posts related to virtual open houses, meet-and-greets, virtual sub-internships, or virtual grand rounds. The Visiting Student Application Service (VSAS) was utilized to determine the presence of virtual sub-internships [8]. Program websites were reviewed for the presence of virtual opportunities. All data points were collected for completed application cycles prior to the 2021–2022 cycle.

Social media use by ophthalmology programs is outlined in Table 1. Of the 118 programs surveyed, 79 (67%) residency programs and departments have a social media presence on Facebook, Twitter, or Instagram, and 13 (11%) have a presence on all three platforms. Instagram saw the most growth since March of 2020, with a 164% increase in accounts created, followed by Twitter with a 27% increase in accounts, and then Facebook with an 8% increase accounts. Open house opportunities appeared to be offered similarly between program websites and social media accounts. Three virtual sub-internships were listed on VSAS, and one program listed a sub-internship opportunity through Instagram not found on VSAS. None of the virtual sub-internship opportunities present on VSAS were advertised on social media platforms (see Table 2).

Due to the recent COVID-19 pandemic, social media appears to be a preferred outlet of outreach for Ophthalmology programs across the United States. There was a substantial rise in the formation of residency Instagram (87.5%) and Twitter (83.3%) accounts throughout 2020, increasing program presence online. This rise represents an impressive demonstration of program adaptability and resilience.

Due to the nature of the upcoming 2021–2022 application cycle, it

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may be beneficial for prospective residents to network with and learn about a program through its social media outlets. For example, many Instagram accounts have publicized “a day in the life of a resident” to help applicants gain a better understanding of residency life at that institution. Instagram is a great outlet with over 1.4 billion active users, and its ease of access through smartphones allows programs to advertise and share posts quickly and directly to their prospective applicants.

In addition to this, programs have also hosted formal open houses for applicants to meet faculty. Of the programs with a social media presence, very few advertised open house or virtual sub-internship opportunities, and only 3 virtual sub-internship opportunities were displayed on VSAS. This is a novel circumstance for applicants, as availability of an Ophthalmology elective has been identified as “contribute [ing] to a successful match” in Ophthalmology [2]. Thus, the COVID-19 pandemic has posed a tremendous challenge to prospective applicants.

Applicants in the 2021–2022 Ophthalmology match cycle may have limited knowledge of various programs outside of information published online. In addition, programs face a similar predicament, as the method of reviewing applications must be adapted to virtual interviews, shortened clerkships, and the presence of only one away elective [9]. We recommend that applicants take advantage of virtual grand rounds, open houses, and social media to learn more about programs, faculty, and residents. Considering travel limitations, students should strive to get involved at their home institution, as letters of recommendation may play a pivotal role in the residency application overall.

This study has limitations in its retrospective nature. In addition, due to the dynamic nature of social media, data may be limited by the search engine used and dates of collection. Furthermore, opportunities are subject to change.

Ophthalmology programs have adapted to the COVID-19 pandemic by increasing their presence on social media and offering virtual open house opportunities for applicants. Instagram and Twitter appear to be the most popular platforms for residency programs. A minimal number of programs have developed virtual sub-internship opportunities. It is recommended that applicants use social media to learn more about programs in preparation for the 2021–2022 ophthalmology match.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Table 1
Basic ophthalmology department social media information.

Social Media Account Characteristics	Total Accounts (%)	Accounts Created Before 2020 (%)	Accounts Created During 2020 (%)
Facebook			
o Departmental Account	41 (34.7%)	38 (92.7%)	3 (7.3%)
o Residency Account	1	1	0
Twitter			
o Departmental Account	27 (22.9%)	25 (92.6%)	2 (7.4%)
o Residency Account	6 (5.1%)	1 (16.7%)	5 (83.3%)
Instagram			
o Departmental Account	13 (11.0%)	11 (84.6%)	2 (15.4%)
o Residency Account	24 (20.3%)	3 (12.5%)	21 (87.5%)

Table 2
Open house and sub-internship information.

Open House and Sub-Internship Characteristics	Number of Opportunities
Facebook	
o Number of Programs with Open House Opportunities	8
o Total Number of Open House Opportunities	18
o Total Number of Sub-Internships Listed	0
Twitter	
o Number of Programs with Open House Opportunities	12
o Total Number of Open House Opportunities	19
o Total Number of Sub-Internships Listed	0
Instagram	
o Number of Programs with Open House Opportunities	7
o Total Number of Open House Opportunities	12
o Total Number of Sub-Internships Listed	1
VSAS	
o Number of Sub-Internships Traditionally Offered in-person	68
o Number of Virtual Sub-Internships Listed	3

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None.

Ethical approval

No approval was needed.

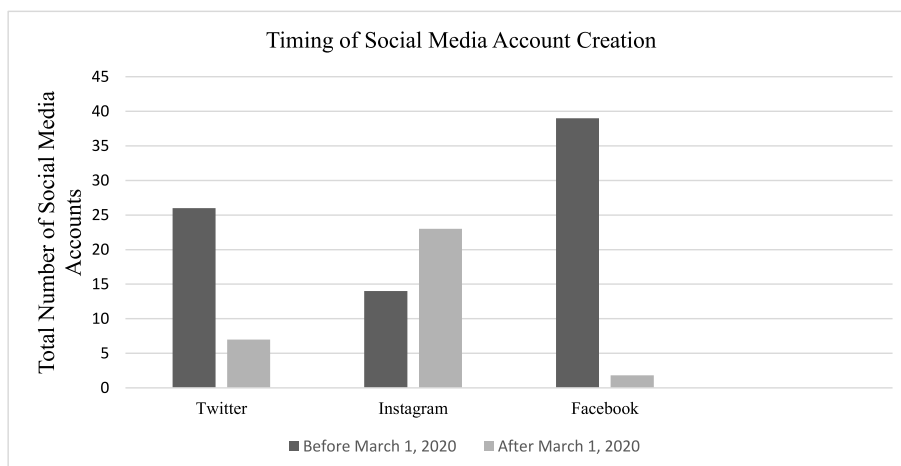


Fig. 1. Date of social media account creation.

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Author contribution

OP contributed as primary author by collecting data, performing data analysis, generating graphs, writing and revising the manuscript, and submitting the work to a journal. AB contributed by collecting data, performing data analysis, writing and revising the manuscript, and assisting with the journal submission process. MS contributed by collecting data, performing data analysis, and writing. MG served as Senior Author by revising the manuscript and assisting with the journal submission process. All authors read and approved the final manuscript.

Registration of research studies

Name of the registry:

NA.

Unique Identifying number or registration ID:

NA.

Hyperlink to your specific registration (must be publicly accessible and will be checked):

NA.

Consent

No consent was needed for this project.

Guarantor

Om Patel is the guarantor of this work.

Declaration of competing interest

The authors declare that they have no conflict interests.

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