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# The #Path2Path Virtual Landscape During the COVID-19 Pandemic: Preparing for the 2020 Pathology Residency Recruitment Season

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## Abstract

On May 11, 2020, the Association of American Medical Colleges released recommendations discouraging in-person activities for away rotations and mandating virtual-only residency recruitment interviews. This paper focuses on how residency programs have attempted to adjust to this vastly different application cycle by using social media to reach their applicants. A total of 138 programs were identified through the Electronic Residency Application Services. The presence of Departmental/Residency program Twitter, Instagram, and Facebook as well as web pages offering virtual opportunities was recorded for each program on October 30, 2020. A total of 132 social media accounts were found; the majority of which were on Twitter, while fewer were on Instagram and Facebook. All 138 pathology residency programs had websites. Sixteen (11.5%) of those advertised virtual open houses and 2 (1.4%) advertised virtual subinternships; social media were more often used for advertisement of these virtual experiences. A total of 58 open house opportunities were advertised on Twitter, 21 on Instagram, and 20 on Facebook. Innovative virtual subinternships ranging from 2 to 4 weeks were developed, but only represented 6% of the usual 126 away rotations available. Pathology programs across the country utilized websites and social media as a method of communication to interact with applicants as part of the #Path2Path in 2020 and to provide virtual opportunities in preparation for a drastically different recruitment cycle.

## Keywords

COVID-19, education, pathology, #path2path, residency recruitment, social media

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## Introduction

On May 11, 2020, the AAMC released the following recommendations regarding away rotations and interviews: Residency interviews should only be conducted virtually, and away rotations should be discouraged unless there is no clinical access to that specialty at the students' home institution or if the away rotation is a requirement of graduation.<sup>1</sup> While an away rotation is not required to apply to a Pathology residency, these suggestions limited exposure to the field, especially for students who need to rotate outside of their home institution

to see different pathology subspecialties. These changes also limited in-person experiences crucial for exposure to hospital

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**Table 1.** Number of Social Media Pages by Type Created Before and After March 1, 2020.

|  | Twitter      |           | Instagram    |           | Facebook     |           |
|--|--------------|-----------|--------------|-----------|--------------|-----------|
|  | Departmental | Residency | Departmental | Residency | Departmental | Residency |
| Number of accounts created before 3/1/2020<br>(% of account type)                | 39 (67.2)    | 5 (45.5)  | 11 (55)      | 1 (11.1)  | 19 (90.5)    | 11 (84.6) |
| Number of accounts created March 1, 2020-October 30,<br>2020 (% of account type) | 19 (32.7)    | 6 (54.5)  | 9 (45)       | 8 (88.9)  | 2 (9.5)      | 2 (15.4)  |
| Total accounts (% of 138 programs)   | 58 (42.0)    | 11 (7.9)  | 20 (14.5)    | 9 (6.5)   | 21 (15.2)    | 13 (9.4)  |

**Table 2.** Number of Social Media Pages by Type Created After March 1, 2020.

|                                      | Number created (%) |
|--------------------------------------|--------------------|
| Social media accounts, total         | 132 (100)          |
| Accounts created after March 1, 2020 | 46 (34.8)          |
| Departmental Twitter                 | 19 (41.3)          |
| Residency Twitter                    | 6 (13.1)           |
| Departmental Instagram               | 9 (19.6)           |
| Residency Instagram                  | 8 (17.4)           |
| Departmental Facebook                | 2 (4.3)            |
| Residency Facebook                   | 2 (4.2)            |

facilities and the environment to which they would be applying as well as forming interpersonal relationships with residents and faculty through direct communication and side-by-side work.

This paper focuses on how residency programs have attempted to adjust to this vastly different, constantly changing, application cycle through the use of social media, mirroring and expanding the #Path2Path approach. #Path2Path was an approach created by “Team Pathology” in 2018 for social media usage to better advertise Pathology as a medical field and dismiss negative myths and stereotypes of the field.<sup>2</sup> Since 2018, many pathology-specific hashtags have been developed and are increasing in use and popularity. Specifically, this paper analyzes the use of Twitter, Instagram, and Facebook in reaching out to applicants, establishing connections, advertising program content via an available website, offering virtual open houses, and pivoting to offer virtual subinternships.

## Methods

An official list of accredited pathology residency training programs participating in the 2020 to 2021 application cycle was obtained from the Electronic Residency Application Service. A total of 138 total programs were identified. All programs were included in this observational study and widely available resources were reviewed for the presence of departmental and/or residency program Twitter, Instagram, and/or Facebook accounts. Google search engine was used to search for accounts. These data were collected and deemed current as of October 30, 2020. This collected work was part of a larger consortium covering a total of 24 specialties analyzing social media use by residency programs as part of the COVID-19

pandemic impact on this application cycle. Social media platforms were reviewed for posts regarding virtual open houses and virtual subinternships. The number of these opportunities was recorded. The posts analyzed were current in October 2020. Both past and future opportunities were recorded. The date of Twitter and Facebook account development was available on the account page. The date of Instagram account development was recorded as the first post on the page. These accounts were then categorized as created before or after March 1, 2020. March 1, 2020 was set as the transition point based on the timeline of the first cases of COVID-19 in America and the start of travel restrictions. The Visiting Student Application Service (VSAS) was reviewed for all pathology virtual and traditional subinternships. The length of the virtual subinternship and number of virtual subinternship per program was recorded. Programs were divided into these regions depending to geographical location categories as determined by the US Census: South, West, Northeast, Midwest, and Islands. The total number of programs using Twitter, Instagram, and Facebook accounts was recorded for each region.

## Results

All 138 pathology residency training programs had available webpages, usually as a part of an overall departmental front-facing web content. Sixteen (11.5%) websites advertised virtual open houses and 2 (1.4%) websites advertised virtual subinternships. A total of 132 social media accounts were created for pathology departments and residency programs. Sixty-nine (52.3%) Twitter, 29 (21.9%) Instagram, and 34 (25.7%) departmental and/or residency training program Facebook accounts were developed. The majority of Twitter (84%), Instagram (68.9%), and Facebook (61.7%) accounts created were departmental accounts. Sixty-seven percent of departmental Twitter accounts were created before March 2020, while 54% of residency Twitter accounts were developed after March 2020. This trend was also seen with departmental and residency Instagram accounts. Fifty-seven percent of departmental Instagram accounts were created before March 1, 2020, compared to the 88% of residency Instagram accounts that were developed after March 1, 2020. In contrast, the majority of both departmental and residency Facebook accounts were created before March 1, 2020. The dates of development of social media accounts are illustrated in Tables 1 and 2. Social media usage also differed among programs in different regions

**Table 3.** Number of Programs Using Each Social Media Outlet by Region.

| Program by region* | Total number of programs | Total number of programs using Twitter | Total number of programs using Instagram | Total number of programs using Facebook |
|--------------------|--------------------------|--|--|---|
| South              | 45                       | 22                                     | 7  | 14                                      |
| West               | 19                       | 12                                     | 6  | 5                                       |
| Northeast          | 48                       | 21                                     | 12                                       | 9                                       |
| Midwest            | 25                       | 14                                     | 5  | 6                                       |
| Islands            | 1                        | 0                                      | 0  | 0                                       |

\* Regions by state according to US census: South: DE, FL, GA, MD, NC, SC, VA, DC, WV, AL, KY, MS, TN, AR, LA, OK, and TX. West: AZ, CO, ID, MT, NV, NM, UT, WY, AK, CA, HI, OR, and WA. Northeast: CT, ME, MA, NH, RI, VT, NJ, NY, and PA. Midwest: IL, IN, MI, OH, WI, IA, KS, MN, MO, NE, ND, and SD. Islands: Puerto Rico, US Virgin Islands, Guam, American Samoa, Commonwealth of the Northern Mariana Islands.

**Table 4.** Number of Programs with Virtual Open House and Sub-Internship Opportunities Advertised per Social Media Outlet.\*

|  | Twitter | Instagram | Facebook |
|--|---------|-----------|----------|
| Number of programs offering virtual open houses              | 35      | 13        | 12       |
| Number of programs offering more than one virtual open house | 15      | 6         | 6        |
| Number of programs offering virtual sub-internships          | 2       | 1         | 1        |

\*As of October 30, 2020.

of the United States (Table 3). Over 60% of the 138 programs were located in either the South or the Northeast. Relatively, programs in the West had greater utilization of Twitter (63%) and Instagram (31.5%) compared to programs in other regions. A greater percentage of programs in the South (31%) used Facebook compared to other regions.

A total of 58 open house opportunities were advertised on Twitter, 21 on Instagram, and 20 on Facebook (Table 4). Thirty-five (50%) of the total 69 programs with Twitter accounts advertised virtual open houses on Twitter. This can be compared to the 12 (41%) and 13 (38%) programs that posted virtual open houses on Instagram and Facebook. For programs advertising virtual open houses, the average number of open houses that was advertised on all social media accounts was approximately 1.6. Fifteen programs on Twitter, 6 programs on Instagram, and 6 programs on Facebook had more than one open house opportunity posted. Virtual subinternships were only advertised by 2 programs on Twitter, 1 on Instagram, and 1 on Facebook. Each of these programs posted 1 virtual subinternship to their respective social media platforms. Seven programs offered virtual subinternships on VSAS, ranging 2 to 4 weeks. A total of 8 virtual subinternships were listed on VSAS, compared to the 126 traditional away rotations available.

## Discussion

Pathology programs across the country utilized websites and social media (including various hashtags such as #Path2Path as a method to communicate with applicants prior to the virtual

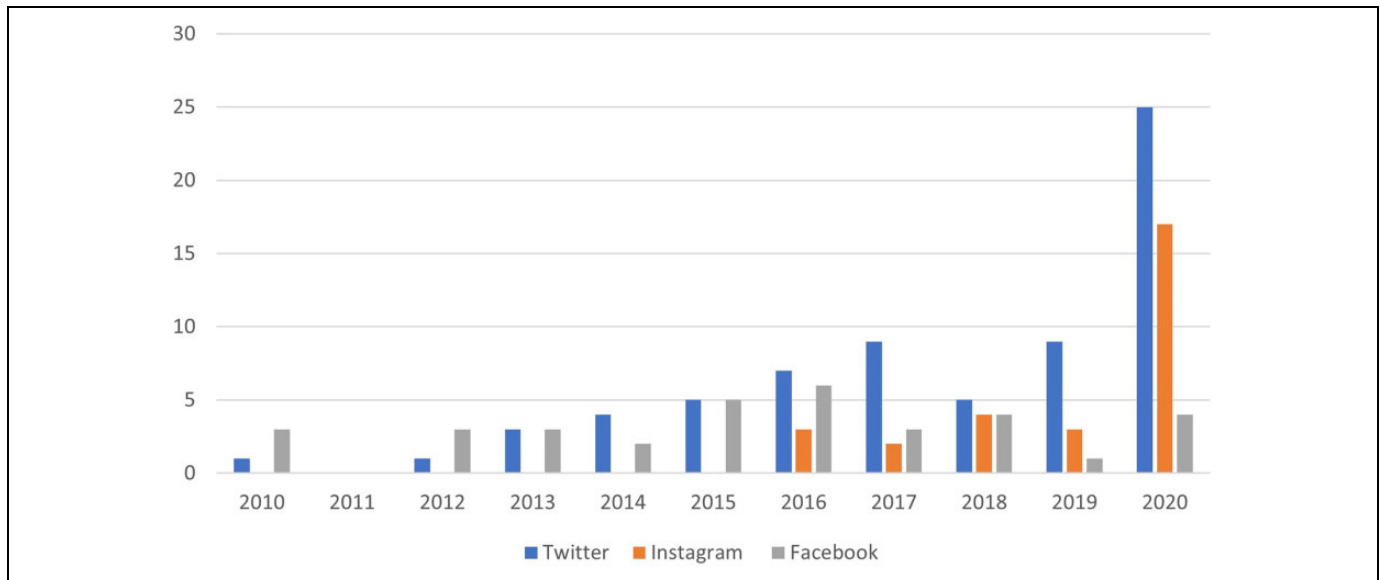
recruitment cycle and to provide virtual opportunities in this drastically different application cycle. All 138 programs throughout the US had a website page, with many programs displaying video tours of the hospital and video interviews with residents. This helped fill a gap for the lack of in-person travel to the facilities and integration into the resident group which is vital to resident applicants when deciding on their final rank order list.

There has been a steady growth in the number of program social media accounts since 2010, with a steep increase in social media usage in 2020 in this new virtual era (Figure 1). Twitter was the social media outlet most utilized by residency programs and pathology departments across all 4 regions of the country. Instagram was utilized second most in the Northeast, while Facebook was second most in the South. Facebook and Instagram were about equally utilized in the West and Midwest (Table 3). Departmental Twitter accounts were the predominant account type created after March 2020 (41.3%), while Instagram had the most residency program accounts (17.4% of total) created after March 2020 (Tables 1 and 2).

Each of these social media outlets were utilized to offer virtual open houses; however, more open houses were advertised on Twitter, compared to Facebook and Instagram (Table 4). There were very few opportunities for virtual sub-internships across all social media outlets with 2 on Twitter and 1 on both Facebook and Instagram from the same program. On VSAS, there were a total of 7 programs that offered virtual away electives for a total of 8 away electives with an average of 3 weeks' duration. In the past, there were traditionally 126 away electives offered on VSAS. The difference in the number of past traditional away electives compared to virtual electives offered this year shows the limitation of exposure to different programs. While Pathology does not require away electives, in a survey of the graduating class of 2019 that matched into Pathology, 43.4% reported having completed 1 or more away electives.<sup>3</sup> Analysis following this application cycle will show the importance of away electives in the ranking and match percentage.

## Study Limitations and Future Directions

Limitations to this study could include inability to find social media outlets for some of the programs due to use of acronyms,



**Figure 1.** Number of pathology program social media accounts created by year from 2010 to 2020.

different naming, and account privacy settings. Also, these data are based on a collection period ending in October 2020, thus new accounts could have been created by various programs after the data collection ended. Future directions following this study could include post-match interviews with applicants on their usage of social media outlets, virtual open houses, and virtual away electives completed as well as a survey of interviewers on the number of applicants who attended virtual open houses and any improvement or limitations these communications had in the application cycle.

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#### References

1. Final Report and Recommendations for Medical Education Institutions of LCME-Accredited, U.S. Osteopathic, and Non-U.S. Medical School Applicants. *AAMC.org*. Published May 11, 2020. Accessed November 11, 2020. [www.aamc.org/system/files/2020-05/covid19\\_Final\\_Recommendations\\_05112020.pdf](http://www.aamc.org/system/files/2020-05/covid19_Final_Recommendations_05112020.pdf)
2. Razzano D, Ziemba YC, Arnold C, et al. Laying a #Path2Path Through Social Media. *The Pathologist*. Published October 2, 2020. Accessed November 11, 2020. <https://thepathologist.com/outside-the-lab/laying-a-path2path-through-social-media>
3. Away Rotations of U.S Medical School Graduates by Intended Specialty, 2019 AAMC Medical School Graduation Questionnaire (GQ). *AAMC.org*. Published October 23, 2019. Accessed November 11, 2020. [https://aamc-orange.global.ssl.fastly.net/production/media/filer\\_public/c6/a7/c6a79bc8-3279-4e0a-9bbf-7b9359172db1/away\\_rotations\\_by\\_specialty\\_gq\\_2019\\_public.pdf](https://aamc-orange.global.ssl.fastly.net/production/media/filer_public/c6/a7/c6a79bc8-3279-4e0a-9bbf-7b9359172db1/away_rotations_by_specialty_gq_2019_public.pdf)