



Social Media Changes in Pediatric Residency Programs During COVID-19 Pandemic

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ABSTRACT

OBJECTIVE: To describe pediatric residency program's virtual presence and opportunities for the 2021 application cycle.

METHODS: A total of 202 pediatric residency programs from the Electronic Residency Application Service (ERAS) were reviewed for departmental and residency Twitter, Instagram, and Facebook accounts. These accounts, residency websites, and the Visiting Student Application Service (VSAS) were reviewed for open house opportunities and virtual subinternships. All data were collected from October 12–15, 2020.

RESULTS: A total of 261 social media accounts were identified. 123 (61%) programs had at least one account, with 32 (16%) programs having presence on all 3 platforms. 68 (34%) programs established new accounts after March 1, 2020. Instagram appeared most utilized with 106 (52%) programs having

accounts. A total of 115 virtual open house opportunities were offered with most offers on Instagram by 61 (30%) programs. Only 2 virtual subinternships were listed on program websites, 2 on Twitter, 1 on Instagram, and 1 on Facebook.

CONCLUSIONS: COVID-19 increased the number of social media accounts used by residency programs. Approximately one-third of all accounts were created after March 1, 2020. However, only 16% of residency programs have a presence on all 3 platforms, allowing for more online growth.

KEYWORDS: COVID-19; medical education; residency application; social media; virtual

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WHAT'S NEW

Pediatric residency training programs responded to the COVID-19 pandemic by way of enhanced social media engagement with prospective applicants and creation of virtual opportunities. Informal interaction through these platforms may continue into future application cycles.

THE COVID-19 PANDEMIC brought abrupt changes to the 2020-2021 residency application process. With national recommendations against visiting rotations and in-person interviews, many prospective residents lost opportunities to be exposed to residency programs in preparation for the 2020-2021 residency Match process.¹ Without these opportunities, applicants may lose the opportunity to experience a program's culture first-hand, experience day-to-day life in a program's city, or interact with ancillary staff other than program residents or faculty. Additionally, programs may not be able to adequately assess an applicant's clinical skills in-person or observe an applicant's face-to-face interaction with patients or ancillary staff. In-person evaluations have historically been important for students and program directors alike.^{2,3} Efforts to reduce viral spread by residency

programs include online opportunities such as virtual open houses and virtual subinternships.⁴ Virtual open houses are informal meet and greets between applicants and residency program representatives, whereas virtual subinternships are attempts at an online conversion of traditional rotations.⁴ Additionally, social media is widely available, providing a framework for residency programs and applicant engagement. An enhanced social media presence by residency programs in several surgical specialties and pathology has been observed in response to the COVID-19 pandemic.^{5–9} In this manuscript we describe the new development of social media accounts by pediatric residency programs to include virtual opportunities for the 2021 application cycle.

METHODS

A list of categorical pediatric residency programs was obtained from the Electronic Residency Application Service (ERAS), identifying 202 programs.¹⁰ All programs were included and reviewed for the ownership of departmental and official residency Twitter, Instagram, and Facebook accounts. Dates of foundation for these accounts were recorded with attention given to establishment before or after March 1st, 2020; the month of March

was chosen as a proxy for the start of the pandemic because it represented an exponential increase in the COVID-19 caseload in the US and the advent of government-mandated restrictions.^{11,12} Social media accounts, program websites and the American Academy of Pediatrics (AAP) were reviewed for posts regarding open house opportunities and virtual subinternships. The Visiting Student Application Service (VSAS) was reviewed for virtual subinternship opportunities.¹³ With many events being advertised in multiple successive posts, we ensured that individual events were counted only once. All data were collected from the period of October 12, 2020 to October 15, 2020. This study received exemption from the UAB Institutional Review Board for Human Use.

RESULTS

Social media presence and virtual opportunities are profiled in [Table](#). In total, 261 social media accounts were identified, 123 (61%) programs had an account on either Twitter, Instagram, or Facebook and 32 (16%) had a presence on all 3 platforms. There were 68 (34%) programs that established new accounts after March 1, 2020.

TWITTER

There were 76 social media accounts identified on Twitter. Residency accounts were nearly twice as prevalent as departmental accounts with 50 (24.8%) and 26 (12.9%) respectively. In terms of account creation date, 49 accounts were established prior to March 1, 2020 and 27 were established after, resulting in a 35.5% increase in account creation. There were 38 virtual open house opportunities found and 2 virtual subinternship opportunities offered on this platform.

INSTAGRAM

There were 112 social media accounts identified on Instagram. Residency accounts were nearly 9 times as

prevalent as departmental accounts with 101 (50.0%) and 11 (5.4%) respectively. In terms of account creation date, 64 accounts were established prior to March 1, 2020 and 48 were established after, resulting in a 42.9% increase in account creation. There were 61 virtual open house opportunities found and 1 virtual subinternship opportunity offered on this platform.

FACEBOOK

There were 73 social media accounts identified on Facebook. Residency accounts were approximately 1.6 times as prevalent as departmental accounts with 45 (22.3%) and 28 (13.9%) respectively. In terms of account creation date, 64 accounts were established prior to March 1, 2020 and 9 were established after, resulting in a 12.3% increase in account creation. There were 18 virtual open house opportunities found and 1 virtual subinternship opportunities offered on this platform.

Instagram appears to be the most utilized platform, with 106 (52%) programs owning accounts. There were 62 (31%) and 60 (30%) programs that had a presence on Twitter and Facebook, respectively. Instagram offered the most open-house opportunities with 61 (30%) programs offering open houses, and 33 (16%) programs offering multiple open-houses on the platform. A total of 115 open house opportunities were offered with 38 (19%) and 18 (9%) programs sharing these on Twitter and Facebook, respectively.

Two virtual subinternships were listed on program websites, 2 on Twitter, one on Instagram, and one on Facebook. VSAS had virtual subinternships listed. The AAP websites offered no open house or virtual subinternship opportunities.

Table. Social Media Characteristics of Pediatric Departments and Residency Program

<i>Ownership and Creation Date of Program Social Media Accounts</i>			
<i>Account Characteristics</i>	<i>Number of Accounts (%)</i>	<i>Established Before March 1, 2020 (%)</i>	<i>Established After March 1, 2020 (%)</i>
Twitter			
• Departmental	26 (12.9)	24 (11.9)	2 (1)
• Residency	50 (24.8)	25 (12.3)	25 (12.3)
Instagram			
• Departmental	11 (5.4)	11 (5.4)	0 (0)
• Residency	101 (50.0)	53 (26.2)	48 (23.8)
Facebook			
• Departmental	28 (13.9)	27 (13.4)	1 (0.5)
• Residency	45 (22.3)	37 (18.3)	8 (4.0)
<i>Number of Programs with Open House and Sub-I Internship Opportunities</i>			
<i>Program Characteristics</i>	<i>Twitter (%)</i>	<i>Instagram (%)</i>	<i>Facebook (%)</i>
Programs with open house opportunities on social media	38 (18.8)	61 (30.2)	18 (8.9)
Programs with virtual sub-internship opportunities on social media	2 (1)	1 (0.5)	1 (0.5)

Twitter and Facebook account creation date given by platform. Instagram account creation date determined by date of earliest post. Percentages reported as proportion of programs owning accounts to total number of residency programs.

DISCUSSION

Pediatric residency training programs were faced with new recruiting challenges in 2020 with COVID-19 restrictions. These guidelines limit visiting student rotations and recommended cancellation of in-person interviews.¹ These guidelines created a barrier for interaction between applicants and pediatric residency training programs. Applicants struggled to decide how many programs to apply to and how to determine program fit without the prospect of personal interactions outside the formal interview. Our study demonstrated that programs attempted to increase potential for interactions by creating social media accounts, which allowed them to share virtual open house opportunities more broadly to prospective applicants.

Nearly a third of the available social media accounts were started after March 1, 2020 suggesting an impressive response by pediatric residency training programs to the COVID-19 pandemic. A paper published in March 2021 noted that Twitter also could play a critical role in a pediatric program's promotion of their residents' achievements and their residency program and in the recruitment of residents. It made a case for all pediatric program directors having a presence on Twitter.¹⁴ From our study, however, Instagram appears to be the preferred platform of outreach for pediatric residency training programs. Across all social media platforms, most accounts were residency based. This suggests that residency programs are taking the initiative to engage with applicants and similar trends have been seen in a wide array of specialties including pathology, otolaryngology, dermatology, general surgery, and neurosurgery.^{5–9} Creation and utilization of social media accounts by residency training programs appears to be beneficial as these accounts offer an enhanced breadth of outreach.^{14–17} However, only 16% of pediatric residency programs have a presence on all 3 studied platforms, indicating that there are still large areas for potential growth. Continued growth and

maintenance of existing accounts may prove beneficial for residency programs, as aspects of this application cycle's virtual transition may continue into future cycles.¹⁸ Previous studies in pediatrics and vascular and plastic surgery have demonstrated program social media presence beneficial to potential applicants.^{15–17} These results are particularly significant within the context of pediatric residency programs, as pediatrics had over 3,000 applicants in 2019 and was a specialty with one of the greatest number of residency programs (Figure).¹⁹

Virtual open houses offer a way for programs to interact with applicants. Pediatric residency programs are using several platforms (such as Zoom, Google Conference Calls, zoom2meeting, etc.) to interview applicants, a novel approach from traditionally conducted in-person interviews. It may benefit residency programs to increase the number of virtual opportunities applicants have to engage in live conversation with current residents and house staff. This could include resident spotlights, a virtual "day in the life" of a resident, hospital or city tours, and live stream Q&A with residents, creating a more encompassing view of the program. While this obviously benefits the prospective resident by allowing them to make a more informed decision on where to begin their clinical training, it should be noted that the residency program will also benefit by determining how well the applicant fits with their program. Ensuring an applicant will be a good fit could be even more important this cycle in particular, given an expected increase in application volume due to eradication of interview travel expenditures.²⁰ We have become a society that has had to quickly adapt to different ways to communicate and connect. It will be interesting to examine the lasting impact of the COVID-19 pandemic on the pediatric residency match. Will more applicants remain at their home institutions due to a lack of in person opportunities? Will programs with more social media presence draw more applicants? Will

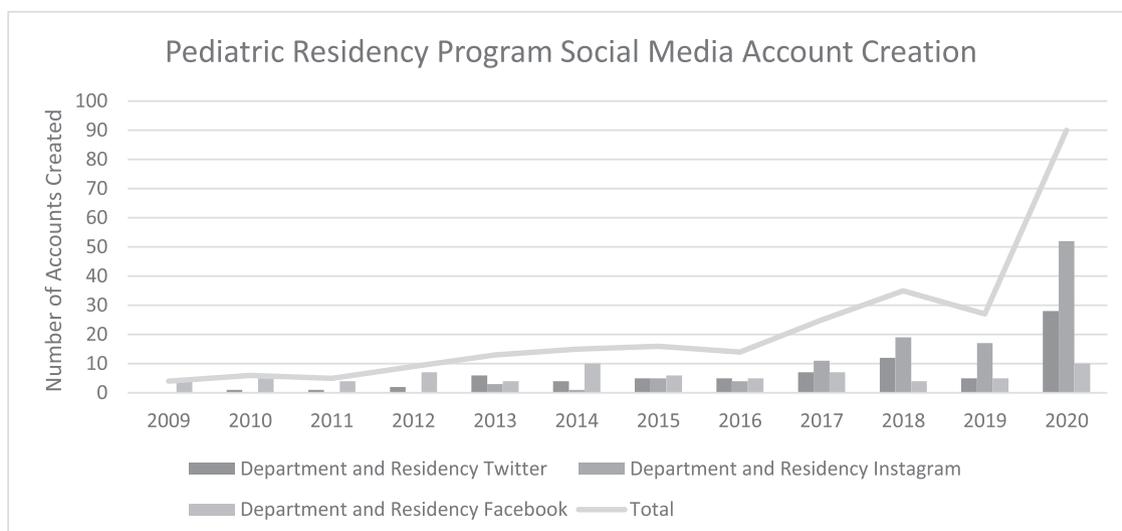


Figure. Pediatric residency program's social media account creation increased by 52.6% from 2019 to 2020. Twitter and Facebook account creation date given by platform. Instagram account creation date determined by date of earliest post. Sum of departmental and residency program accounts reported by platform and year of creation respectively.

programs match further down their rank list with applicants applying more broadly? These questions may benefit from future analysis of the 2021 Match.

This manuscript has limitations including its retrospective nature. Data may be skewed due to the constant updates to social media pages and changes in platform usage. Conversely, there was no minimal activity that was used as a standard for concluding a program had an active account, resulting in the possibility that accounts with little activity or long periods of inactivity being included in the data analysis. In addition, departmental grand rounds, virtual departmental conferences, specialized-tract open houses, and other local and regional opportunities may not have been captured. Other metrics, such as number of followers, number of posts per week, use of texts vs photographs vs videos, were not examined in this study. Retrospective surveys of residents and residency directors could shed more light on the overall impact of social media on the 2021 Match. This study's focus was specifically aimed at describing how pediatric residency training programs responded the COVID-19 pandemic, thus the response of other specialties is not reported within. However, similar responses have been previously observed in the specialties of pathology, otolaryngology, dermatology, general surgery and neurosurgery.⁵⁻⁹

CONCLUSIONS

Pediatric residency programs adapted quickly to the COVID-19 pandemic by way of social media engagement with applicants and creation of virtual open house opportunities. Few virtual subinternship opportunities were observed. Instagram had tremendous growth following the onset of the COVID-19 pandemic. Outreach development was also observed on Twitter and Facebook in a lesser extent. We recommend applicants utilize social media accounts as an introduction to pediatric residency training programs to gain better insight into unique training opportunities and residency lifestyle within the program. Further analysis after the completion of the 2021 Match may provide additional findings.

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