

BRIEF RESEARCH REPORT

Education

Evaluation of Emergency Medicine Residency Programs' use of social media in the setting of the COVID-19 pandemic

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Abstract

Objectives: The coronavirus disease 2019 (COVID-19) pandemic significantly affected the ability of residency programs and applicants to interact using traditional methods of in-person interviews and visiting rotations. We examined the social media presence of emergency medicine (EM) residency training programs and how programs responded to the COVID-19 pandemic.

Methods: The Electronic Residency Application Service (ERAS) identified EM residency programs that participated in the 2021 match. Programs were reviewed for the presence of a website and social media accounts on Twitter, Instagram, and Facebook, as well as foundation date. Data were collected after the ERAS application deadline.

Results: All programs, except one, had some sort of online presence. A total of 258 websites and 476 social media accounts were identified. The majority of programs maintained an account on Twitter (75%), Instagram (61%), or Facebook (38%). Most Twitter and Facebook accounts were established before the onset of the COVID-19 pandemic. However, 46% of Instagram accounts were created after March 1, 2020. During 2020, there was a 34% increase in total social media account development, higher than in previous years.

Conclusion: EM residency training programs have a robust online presence. Account development continued to grow in 2020, after the onset of the COVID-19 pandemic, and growth on Instagram was noted to be substantial. Interactions through online platforms may supplement the residency application process, but their efficacy is unclear.

KEYWORDS

COVID-19, emergency medicine, residency training program, social media

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1 | INTRODUCTION

1.1 | Background

Over the last decade, there has been a growing number of emergency physicians and emergency medicine (EM) residency programs on social media. These accounts are used for education, discussion, networking, outreach, and advocacy within the medical community and beyond.¹⁻³ On Twitter, the popular hashtag #MedTwitter broadly links medical students, residents, attendings, and other contributors for easy interaction. Furthermore, the popular “Free Open Access Medical Education (FOAMed)” campaign encourages the use of online platforms to disseminate medical knowledge.⁴⁻⁵ More specifically, the academic EM community has used Twitter in various ways, from sharing clinical pearls to linking national conference attendees.⁶ Social media’s role in medicine continues to evolve and may become increasingly popular as a residency recruitment tool. If medical students use social media at similar rates to other young adults, then roughly 70% are Facebook and Instagram users, and roughly 40% are Twitter users—making these potentially strong communication channels.⁷

1.2 | Importance

After the onset of the COVID-19 pandemic, necessary social distancing guidelines altered the traditional residency application cycle. In May 2020, the Coalition for Physician Accountability released a statement recommending the suspension of most visiting rotations and encouraged programs to implement virtual interviews.⁸ The academic EM community subsequently supported these recommendations and transitioned to virtual interviews for the 2020–2021 cycle.⁹ Although one benefit of virtual interviews is monetary savings amounting to thousands of dollars, previous studies have shown that personal interactions during interview day are significant for both applicant and program rank list determination because of the many factors assessed during the interview day or at the preinterview social event.¹⁰⁻¹² With these opportunities limited, social media may have increased importance, serving as one way for applicants to get a sense of the unique opportunities at programs as well as the applicant’s overall fit.

1.3 | Goal of this investigation

Although the literature is limited, a previous study of EM residents and faculty at several programs found that a majority of both groups would be interested in using social media to promote their residency program.³ However, there is a paucity of literature examining whether EM programs actually use social media as an advertisement and recruitment tool for prospective residents. Given the newly present limitations of in-person interactions, the current authors posit that COVID-19 may encourage more EM residency programs to use social media. In this article, we describe EM residency programs’ current presence on 3 popular social media platforms—Twitter, Instagram,

The Bottom Line

The COVID-19 pandemic has changed the way emergency medicine residency programs have recruited applicants. Many programs had an online presence before the pandemic with an exponential growth of 34% in social media accounts in 2020 as recruitment moved virtually. The use and efficacy of these accounts for recruitment remains unclear.

and Facebook—and evaluate whether there is significant growth in the presence of EM residencies on these platforms associated with the early parts of the COVID-19 pandemic.

2 | METHODS

2.1 | Study design

An official list of accredited EM residency programs was obtained from the Electronic Residency Application Service (ERAS), identifying 262 total programs, of which 260 participated in the 2021 match. The websites and social media pages of these 260 programs were individually identified and analyzed. All data were collected in November 2020 after the ERAS deadline of October 21, 2020, ensuring that all accounts created with an intent to engage applicants were included. Institutional review board exemption was received for this investigation.

2.2 | Account identification

The Google search engine was used in conjunction with each social media platform’s search engine to identify program and department accounts. When using the Google search engine, department and residency programs pages were ascertained using the corresponding school name followed by “emergency medicine department” or “emergency medicine residency program” and one social media platform. For example, if searching for State University’s emergency medicine residency program on Instagram, the search phrase “State University emergency medicine residency program Instagram” was typed into the Google search bar. If no account was found through this search, specific social media searches were conducted using the school’s name followed by “emergency medicine department” or “emergency medicine residency program.”

2.3 | Analysis

Results of the search were reviewed by our team and were determined to represent either a residency program or an EM department. This difference was signified by the title or key phrases used on the page. Any account associated with an EM residency program or EM department

TABLE 1 Use of 4 online platforms by emergency medicine residency programs and departments

	Number of Programs (%)
Electronic Residency Application Service listed emergency medicine residency programs participating in 2021 match	260 (100)
Programs with an associated Twitter account	196 (75)
• Departmental account	51 (20)
• Residency program account	162 (62)
• Both departmental and residency program account	17 (7)
Programs with an associated Instagram account	158 (61)
• Departmental account	14 (5)
• Residency program account	148 (57)
• Both departmental and residency program account	4 (2)
Programs with an associated Facebook account	98 (38)
• Departmental account	23 (9)
• Residency program account	78 (30)
• Both departmental and residency program account	3 (1)
Programs with an associated website	258 (99)

was counted in our data, regardless of the amount of account activity (posts, followers, etc). Rarely would a program or department have >1 account on the same social media platform, in which case only 1 account was counted. Accounts for fellowships or individual divisions within a department (eg, wilderness medicine, ultrasound, toxicology, etc) were excluded. Each account's date of creation was recorded. This information is clearly stated on Twitter and Facebook accounts. For Instagram, the date of the first post was used as a surrogate for the date of account creation. Analysis was performed using Microsoft Excel (Microsoft Corp.; Redmond, WA) and descriptive statistics provided this study's findings.

3 | RESULTS

3.1 | Collective data

Of the 260 EM residency programs participating in the 2021 match, 259 programs (99.6%) used program websites and Twitter, Instagram, or Facebook accounts. In total, 258 websites and 476 social media accounts were found to be affiliated with an EM residency or department. Most programs maintained a departmental or residency specific account on Twitter (75%), Instagram (61%), or Facebook (38%). Sixty-five programs (25%) were found to have an account on all 3 platforms. Most accounts (82%) were residency specific. These findings are detailed in Table 1.

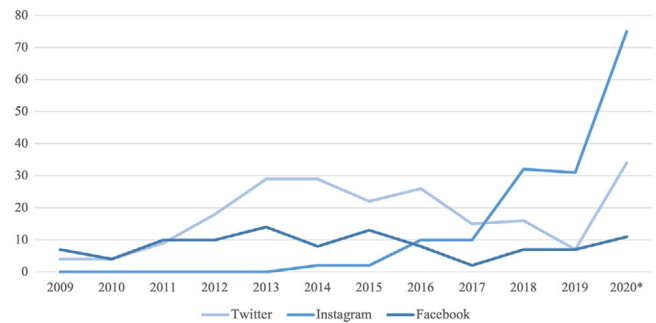


FIGURE 1 Number of new social media accounts affiliated with an emergency medicine residency program or department created per year (2009–2020). *2020 has incomplete data because data were collected in November 2020

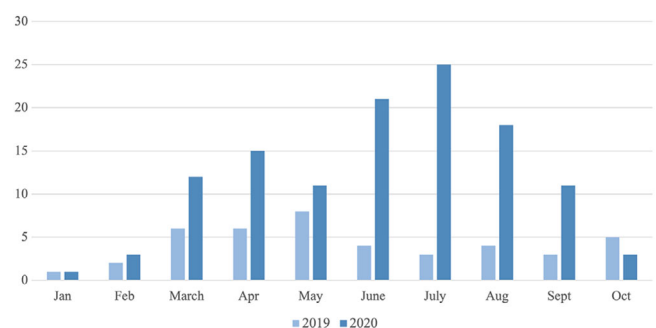


FIGURE 2 Number of new social media accounts affiliated with an emergency medicine residency program or department created per month in 2019 and 2020. Data was collected in November 2020, no 2020 data for November and December are available for comparison

3.2 | Relation to COVID-19

Most Twitter (85%) and Facebook (90%) accounts were created before the onset of the COVID-19 pandemic. Nearly half (46%) of Instagram accounts were created after March 1, 2020. An increase of 34% in total social media account development was observed between January 1, 2020, and November 1, 2020. The growth in the number of social media accounts over time is shown in Figures 1 and 2.

4 | LIMITATIONS

Additional social media accounts may have been created or deleted since data collection in November 2020. Some programs may not have been captured by our standardized internet searches, which did not account for abbreviations or nicknames. ERAS was used to identify EM programs participating in the 2020–2021 application cycle; therefore, this study did not capture non-ERAS participating programs, including some new EM residency training programs. Last, this study focused on the presence and creation date of social media accounts in relation to the COVID-19 pandemic. However, we are unable to definitively say whether these accounts were used for residency recruitment.

5 | DISCUSSION

There has been a growing presence of EM residency programs and departments on Twitter, Instagram, and Facebook in recent years, with a particularly rapid change in 2020. During 2018 and 2019, the total number of EM social media accounts rose by 21% and 14%, respectively. However, between January 1, 2020, and November 3, 2020, there was a 34% increase in the number of EM accounts. The increased growth observed in 2020 may suggest that EM residency training programs responded to the COVID-19 pandemic by way of social media. However, this growth may also be attributed to new EM residency program development, as there was a 7% increase in the number of EM programs participating in the National Resident Matching Program match between 2020 and 2021.¹³⁻¹⁴

Social media's role in medicine may be transitioning, in part, to be a resident recruitment tool. Recent literature recommends that residency programs use web pages and social media to promote their "brand" and highlight the mission, values, strengths, and culture of the program.¹⁵⁻¹⁶ One way programs are doing so is by advertising virtual open houses and virtual subinternships on social media.¹⁷⁻²² These efforts are not unnoticed by residency applicants. Applicants applying to various specialties have stated that web pages, social media, and virtual interactions are beneficial and do influence the applicant's opinions about a program.²³ Furthermore, between 60% and 70% of applicants attended a virtual open house and found it helpful.²⁴⁻²⁵

The efficacy of this necessary virtual transition and resulting social media engagement has yet to be fully ascertained. Virtual interactions are felt to broaden access for applicants, as applicants who may have previously been limited in the breadth of their application owing to scheduling or physical constraints have many new platforms to interact with and learn about different EM residency programs. Ideally, applicants could use social media to learn more about programs before applying and interviewing, which could be a cost-saving endeavor. The average cost for the application to residency across all specialties is nearly \$3500.²⁶⁻²⁷ A study at 1 southeastern EM program found that applicants spent an average of \$414 per interview attended and a total of \$8312 in residency application costs.²⁸ Future research could examine the application-related savings owed to virtual interactions.

EM residency training programs appear to be working toward more engagement on social media. Our findings suggest that Twitter is the most used platform, accounting for 45% of all EM affiliated accounts. However, the data show there has been a recent shift in platform preference. The expansion of EM residency accounts on Twitter has slowed, whereas growth on Instagram has exponentially risen. This is especially apparent during 2020, where 63% of all new EM social media accounts were on Instagram. One possible explanation for this growth may be that EM residency programs recognize Instagram's heavy influence on users ages 18-29.⁷ In addition, Instagram's overall user base is significantly larger than that of Twitter, with 300% more monthly users.⁷ Although our study was limited to 3 of the more common platforms, other popular social networking sites like Snapchat and TikTok could be examined for EM program presence.

Our study focused on programs' presence on social media with no assessment of medical student engagement with these platforms. Future studies may determine the utility of medical student engagement through these platforms. Specific questions of interest include how residency-related social media is received by applicants and how these virtual interactions affect decisions on where to apply and whom to rank. Exploration of organizational policies toward social media may explain trends observed in this article. In addition, examination of the content of programs' social media posts may prove useful.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Cassidy S. Baldwin: Contributed through data collection, analysis of data, writing of the manuscript, and approval of the final version for submission. Anthony R. DeMarinis: Contributed through data collection, analysis of data, writing of the manuscript, and approval of the final version for submission. Nikhi P. Singh: Contributed through data analysis, idea development, writing of the manuscript, and approval of the final version for submission. Charles A. Khoury, MD, MSHA: Contributed through idea development, team leadership, editing the manuscript, and approval of the final version for submission.

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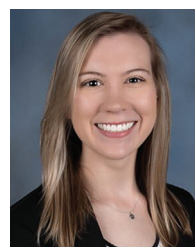
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