PRiMER
peer-reviewed reports in medical education research
learner research

An Analysis of a Family Medicine Residency Program's Social Media Engagement During the 2021-2022 Match Cycle

Annie Phung, DO | Katherine Wright, PhD, MPH | Natalie J.S. Choi, MD

PRiMER. 2023;7:8.

Published: 3/20/2023 | DOI: 10.22454/PRiMER.2023.426399

Abstract

Introduction: The COVID-19 pandemic affected the 2021 and 2022 residency recruitment cycles. Many programs rapidly shifted their recruitment efforts to include a greater presence on social media (SoMe), assuming that applicants would use these avenues as supplemental sources of information. As this represents a deviation from traditional recruitment efforts, our research team sought to analyze social media trends during the 2021-2022 family medicine virtual Match.
Methods: We obtained social media analytics from our program's Facebook, Instagram, and Twitter accounts to trend user engagement as well as sources of traffic to our program's website.
Results: Our study shows the ratio of users reached per post correlated with Instagram and Twitter more than Facebook. The most users reached per post were in June, October, and February, corresponding to when Electronic Residency Application Service (ERAS) application opened, when interview invitations were mostly extended, and rank order list submission. GME website traffic sources revealed that Google was the greatest driver to our website, more than the three SoMe platforms combined.
Discussion: Our findings suggest Instagram and Twitter engage more users per post compared to Facebook, and user engagement appeared more aligned with the Match cycle timeline than the number of posts generated. It is important to continue to explore effective ways for applicants and programs to engage with one another in the ongoing uncertainty of virtual interviewing.

Background

The Council of Academic Family Medicine (CAFM) and the National Residency Match Program (NRMP) recommended virtual interviews during the 2021 and 2022 residency application cycles given the uncertainties of the COVID-19 pandemic and improving equity for candidates.[1–4] With in-person restrictions, social media (SoMe) became popular tools for applicants and residency programs to interact, with Instagram, Twitter, and Facebook being the most common.[5–8] There is currently limited analysis of SoMe data in residency recruitment. Our research team, from a community-based, university-affiliated family medicine (FM) residency program, sought to better understand social media trends during FM residency recruitment.

Methods

Social Media and Website Analytics

User engagement defined for Facebook and Instagram, "reach," as the number of unique individuals who viewed each post, and for Twitter, "impression," as the number of times each tweet was viewed by users. Google analytics data collected from our graduate medical education (GME) website quantified sources of traffic. We conducted statistical analysis with SPSS Version 28 for Windows. We gathered social media data from June 9, 2021 to February 28, 2022, encompassing the 2021-2022 Match cycle. The Northwestern University Institutional Review deemed this project exempt (STU00208606).

Results

Facebook

The Facebook account posted 74 times, reaching 12,185 users, repeat and unique. The number of unique users each post reached ranged from 78 to 366 (M=195, SD=106). October had the most reach per post. There was no correlation between the number of posts and users reached, (r=0.047, P=.903; Figure 1).

Instagram

The Instagram account posted 80 times, reaching 22,469 users, repeat and unique. The number of unique users each post reached ranged from 156 to 421 (M=309, SD=82). February had the most reach per post. There was a moderate positive correlation between the number of posts and users reached, (r=0.593, P=.093; Figure 2).

Twitter

The Twitter account posted 49 times, with a total impression of 6,732 views, as original and reshared posts. The number of unique impression per post ranged from 60 to 947 (M=282, SD=270). January had the most impressions per post. There was a significant positive correlation between the number of posts and viewer impressions, (r=0.88, P=.002; Figure 3).

Website Analytics

Sources of referred website traffic served as a surrogate marker of successful SoMe recruitment efforts (Table 1). Our program's GME website was visited by 2,949 unique users a total of 4,186 times. Google referred the most users to our website, 2,427 times. Twitter brought 26 users, Facebook brought 13 users, Instagram brought one user.

September had the most website traffic with 865 unique users. There was no correlation between user engagement of Facebook reach (r=-0.06, P=.881), Instagram reach (r=0.19, P=.625), and Twitter impressions (r=-0.02, P=.965) with engagement to the residency program website (Figure 4).

Discussion

Social media use during COVID-19, with Facebook, Instagram, and Twitter grew popular among residency programs to engage potential applicants.[9,10] Our FM residency program SoMe analytics suggest engagement among applicants may be more complex than previously thought. While our Facebook and Instagram posts were similar in number, Instagram reached more users with a weak positive correlation of users engaging with our website when compared to Facebook. Though our program utilized Twitter less, a platform with a unique algorithm and different measure of engagement than Facebook or Instagram, it demonstrated the strongest positive correlation between number of tweets and user impressions.

Applicants utilized Google to discover our program's website more frequently than the three platforms

combined. More content was not directly associated with increased website traffic. Though minimal, Twitter brought more website traffic than Instagram and Facebook combined. While we utilized Twitter less, its expansive algorithm of content sharing can potentially reach more users.[11] SoMe as a whole may be less useful for programs to attract applicants to their website compared to other platforms such as Google and residency search tools.

The Electronic Residency Application Service (ERAS) application season began in June, with application submission and residency program review in September.[12] The National Residency Match Program (NRMP) program director survey showed that most FM interview invitations were extended in October (40%) and conducted between October, November, and December (23%, 38%, and 28%, respectively).[13] Our Facebook and Instagram accounts posted the most content in June through October to attract potential applicants. To better understand engagement, we analyzed the users reached per post, with the most occurring in June and October for both Facebook and Instagram, and February for Instagram only. These months correlated with the recruitment timeline: when ERAS opened applications in June, when most interview invitations were extended in October, and prior to submission of rank order lists throughout February due by March 2.

While our study is limited by our single residency program and lack of content standardization among platforms, further aims of investigation for SoMe use during residency recruitment can explore quantity and quality of posts, time of post publication, and utility of hashtags. Assessing the type of information that an applicant aims to obtain from a program's website and SoMe presence, such as goodness of fit, including culture of a program and geographical preferences, versus curricular information, could clarify the role of the various platforms. Lastly, while we found relationships among user engagement and specific Match timeline events, correlations between applying, interviewing, and matching, continue to be a source of investigation.

In conclusion, our study suggests that a residency program's SoMe use for applicant engagement may be more complex than previously hypothesized. Number of posts did not directly correlate with user engagement, whereas timeline of the application season seemed to be more related. Instagram and Twitter may be more effective platforms to focus residency recruitment efforts. With continued virtual interviewing, it is unknown if and how it will persist after COVID-19. Both residency programs and applicants alike can benefit from the continued investigation into sharing information and engaging with one another in this growing period of technological use.

Tables and Figures

Figure 1: Facebook Reach per Post

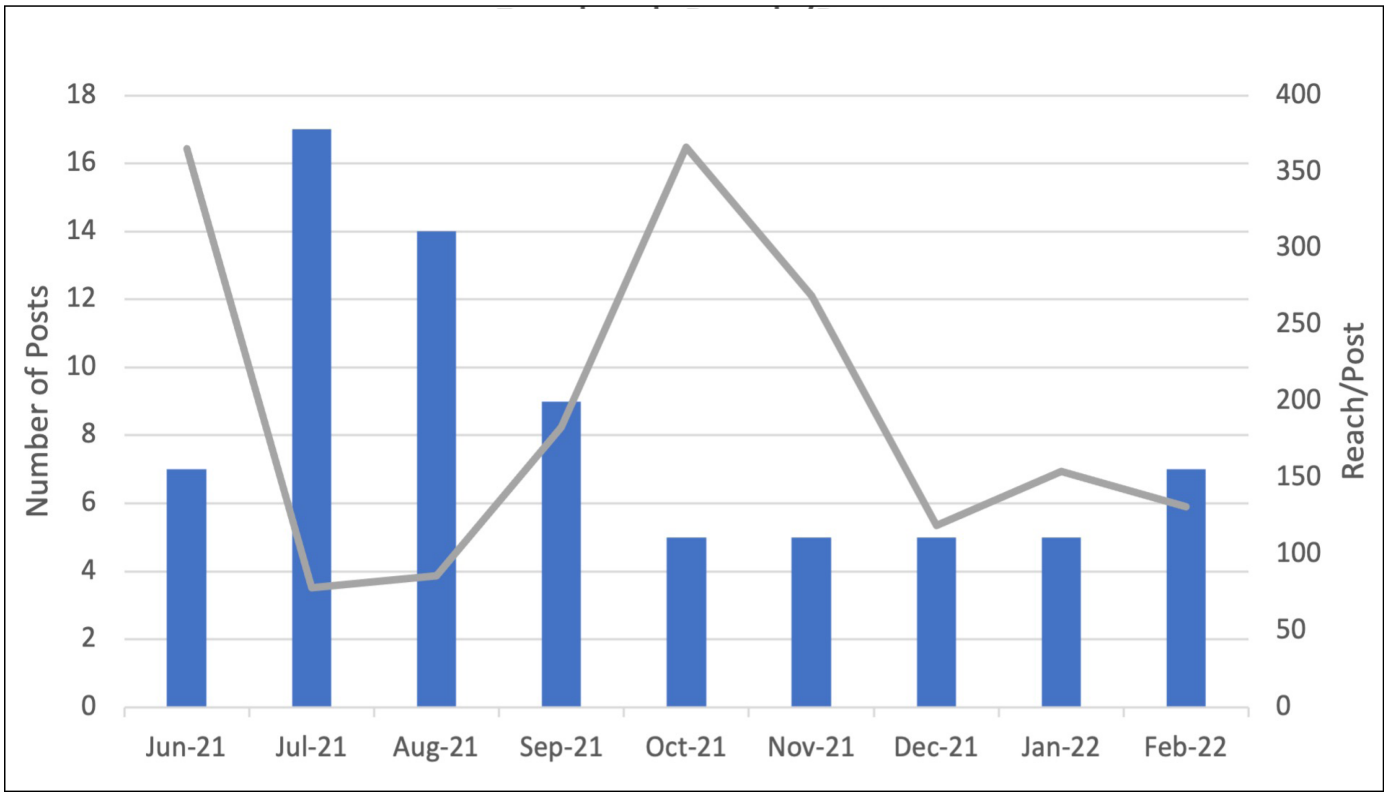


Figure 2: Instagram Reach per Post

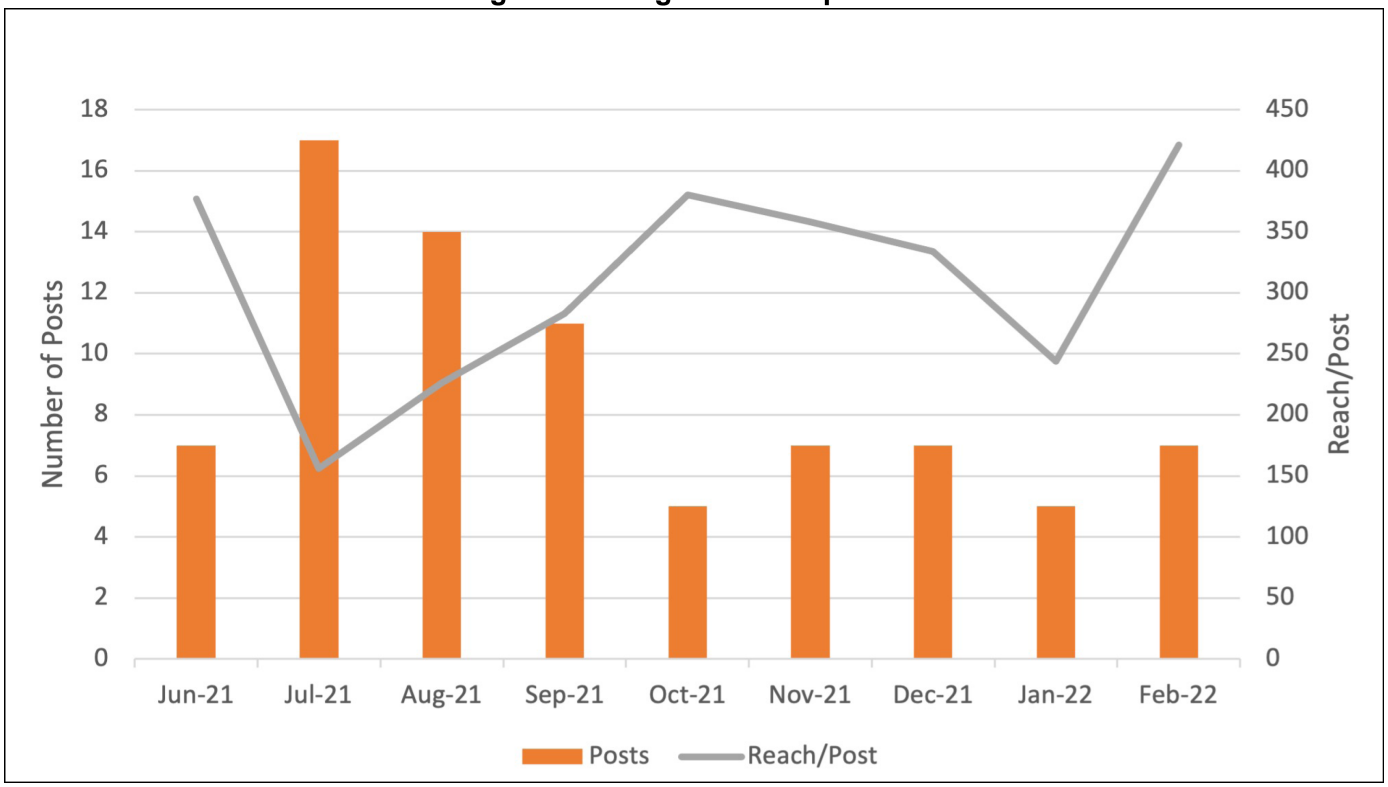


Figure 3: Twitter Impressions per Post

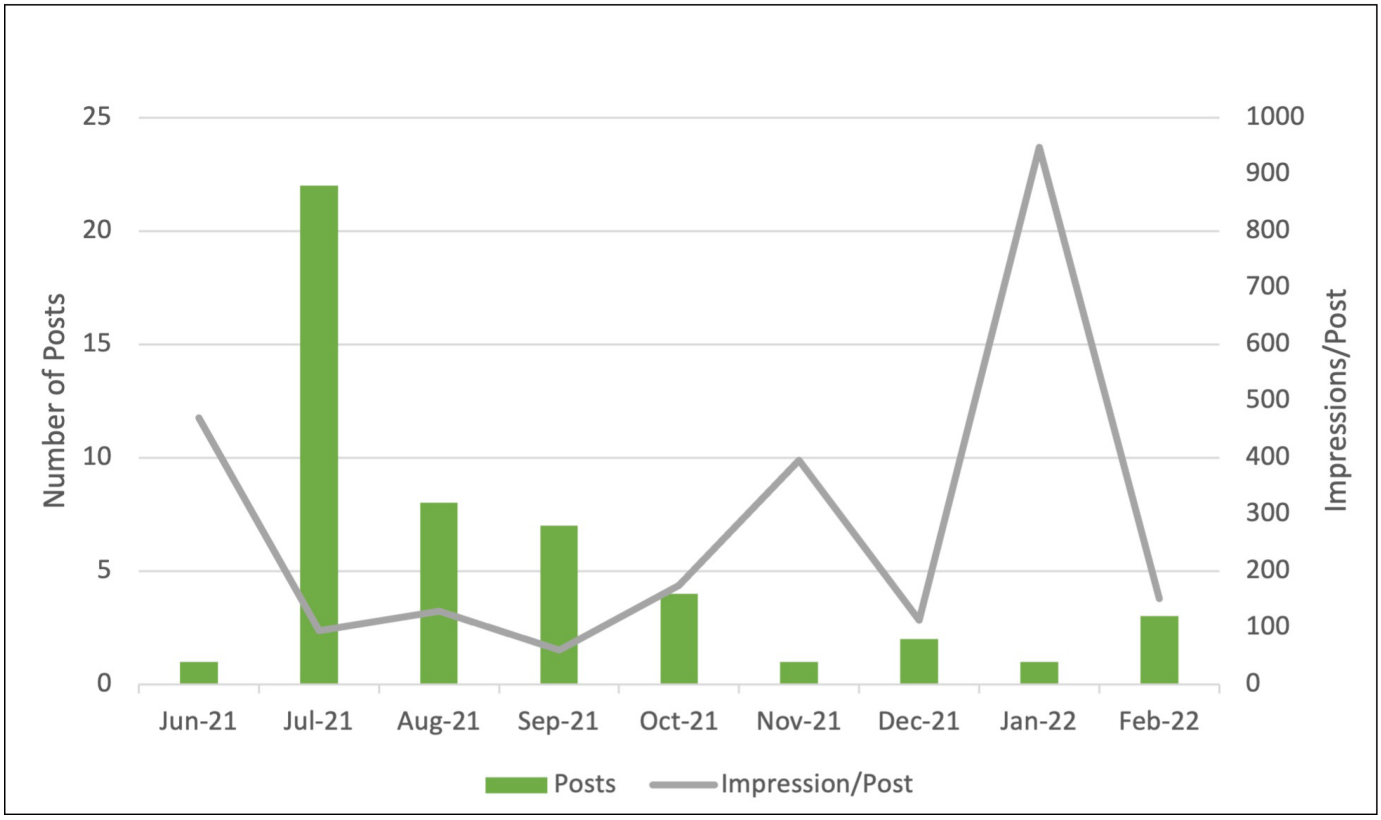
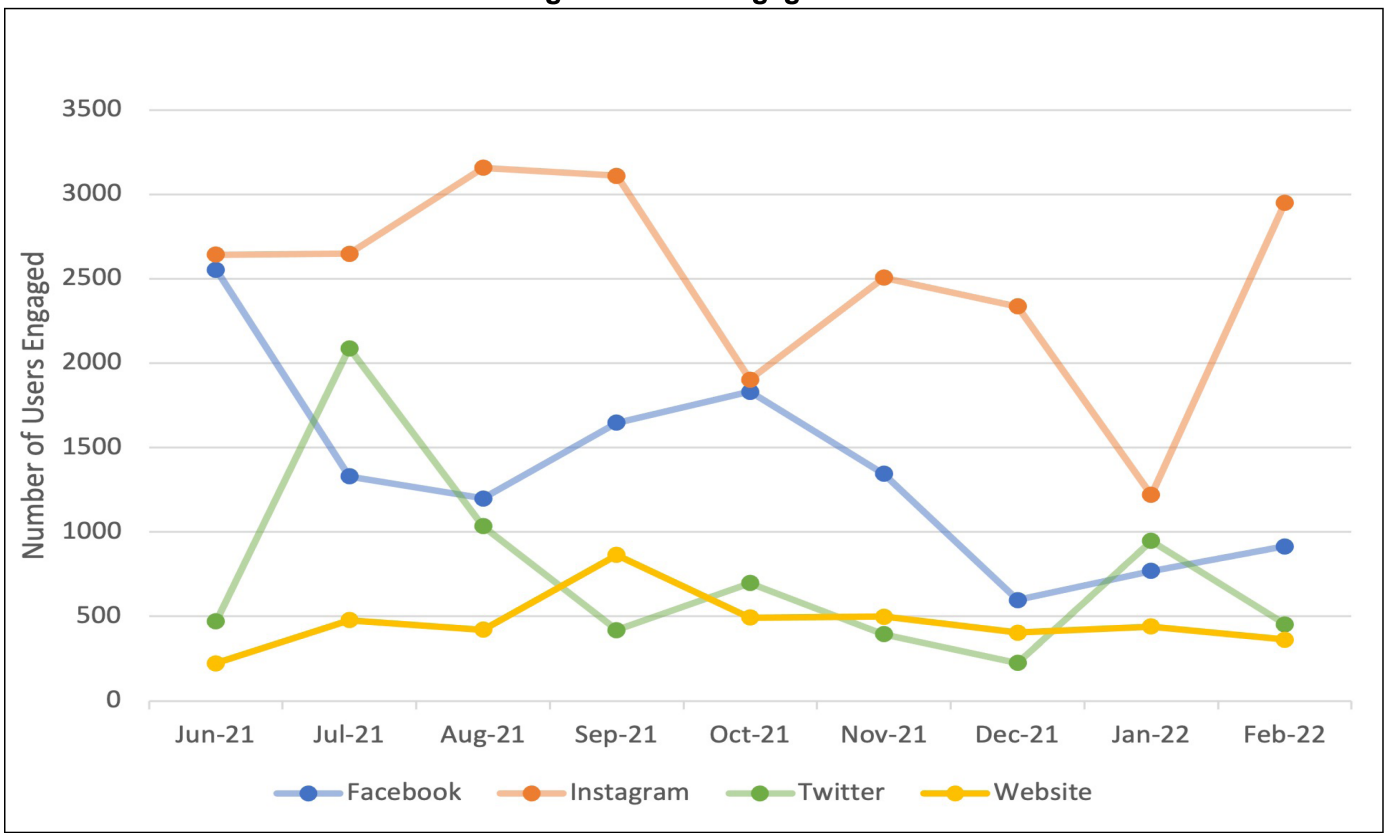


Table 1: Sources of Referred Website Traffic

Website	Users
Google	2,427
ERAS	411
Direct	321
McGaw/Northwestern Medicine/Northwestern University	231
Residency Explorer	106
Bing	55
IAFP (Illinois Academy of Family Physicians)	33
AAMC	32
Yahoo	30
Twitter	26
AAFP	22
Facebook	13
Duckduckgo	9
Freida	8
Instagram	1

Figure 4: User Engagement



Acknowledgments

Presentation: This study was presented as "Social Media Use of Family Medicine Applicants During the 2021-2022 Match Cycle," November 18-22, 2022 at North American Primary Care Research Group (NAPCRG) Annual Meeting in Phoenix, Arizona.

Corresponding Author

Annie Phung, DO

Northwestern University Feinberg School of Medicine Department of Family & Community Medicine, 710 N Lake Shore Dr, 4th floor Abbott Hall, Chicago, IL 60611

Annie.Phung@northwestern.edu

Author Affiliations

Annie Phung, DO - Northwestern University Feinberg School of Medicine, Chicago, IL

Katherine Wright, PhD, MPH - Northwestern University Feinberg School of Medicine, Department of Family & Community Medicine, Chicago, IL

Natalie J.S. Choi, MD - Northwestern University Feinberg School of Medicine, Department of Family & Community Medicine, Chicago, IL

References

1. Pasala MS, Anabtawi NM, Farris RL, et al. Family medicine residency virtual adaptations for applicants during COVID-19. *Fam Med*. 2021;53(8):684-688. doi:10.22454/FamMed.2021.735717
2. Council of Academic Family Medicine. Accessed March 22, 2022. https://academicfamilymedicine.org/
3. Westfall J, Michelfelder A, Leroy GL, Bartlett-Esquillant G, Alexander C, Barr WB. Recommendations for

2021-2022 Family Medicine Residency Interview Process. 2021. Accessed March 14, 2023. https://www.stfm.org/media/3631/recs-for-2021-2022-residency-interview-process-family-medicine.pdf?usp=sharing
4. Letter to our Family Medicine Community Residency Interview Process. Published online 2020.
5. Baldwin CS, DeMarinis AR, Singh NP, Khoury CA. Evaluation of emergency medicine residency programs' use of social media in the setting of the COVID-19 pandemic. *J Am Coll Emerg Physicians Open*. 2022;3(1):e12637. doi:10.1002/emp2.12637
6. Patro A, Landeen KC, Stevens MN, Cass ND, Haynes DS. The digital dilemma: perspectives from otolaryngology residency applicants on social media. *Ann Otol Rhinol Laryngol*. 2022;131(9):954-961. doi:10.1177/00034894211050625
7. Czawlytko C, Smith E, Awan O, Resnik C, Hossain R. The effect of virtual interviews and social media on applicant decision-making during the 2020-2021 resident match cycle. *Acad Radiol*. 2022;29(6):928-934. doi:10.1016/j.acra.2021.05.028
8. Heard JR, Wyant WA, Loeb S, Marcovich R, Dubin JM. perspectives of residency applicants and program directors on the role of social media in the 2021 urology residency match. *Urology*. 2022;164:68-73. doi:10.1016/j.urology.2021.08.041
9. Top US mobile social apps by users 2019. Statista. Accessed August 25, 2022. https://www.statista.com/statistics/248074/most-popular-us-social-networking-apps-ranked-by-audience/
10. Sterling M, Leung P, Wright D, Bishop TF. the use of social media in graduate medical education: a systematic review. *Acad Med*. 2017;92(7):1043-1056. doi:10.1097/ACM.0000000000001617
11. How the Twitter algorithm works in 2022 and how to make it work for you. Accessed March 27, 2022. https://blog.hootsuite.com/twitter-algorithm/
12. ERAS 2023 Residency Timeline, Students & Residents. AAMC. Accessed August 27, 2022. https://students-residents.aamc.org/eras-tools-and-worksheets-residency-applicants/eras-2023-residency-timeline
13. Results of the 2020 NRMP Program Director Survey. 2020. Accessed August 27, 2022. https://www.nrmp.org/wp-content/uploads/2022/01/2020-PD-Survey.pdf