

Editorial

Engagement of the Allergy and Immunology Community on Twitter: The Time Is Now

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In a recent Practice Pearl, Feng and Farnam¹ discuss using Twitter to receive timely information relevant to the practice of allergy and immunology. Allergist-immunologists can curate a Twitter newsfeed to access relevant in-press research articles, expert opinions, and timely local, national, and international news that can affect practice. In this editorial, we outline possibilities and benefits of using Twitter as a virtual community of practice. In a virtual community of practice, community members can virtually share research findings and ideas in real time, discuss advances and timely events and how they may affect practice, and gauge and improve public knowledge about specialty-related topics.² The vast majority of medical education and colleague interactions are now virtual secondary to the ongoing COVID-19 pandemic.³ Twitter may allow for productive discourse amongst allergy and immunology specialists, other medical experts, trainees, and patient advocates from around the world in a manner that is not possible in traditional face-to-face encounters.

HASHTAG USE IN THE ALLERGY AND IMMUNOLOGY COMMUNITY

Hashtags can be used on Twitter to bring ideas and people together. Multiple hashtags have been used in the field of allergy and immunology (Table 1). Some are conference specific (#AAAAI21, #ACAAI20), whereas others are disease or topic specific (#Allergy, #Immunology, #Asthma, #Eosinophil, #FoodAllergy) or are related to a specific advocacy effort (#AIDocs). On July 24, 2020, #AIMedEd was proposed on Twitter as a unifying hashtag for the specialty to include allergy and immunology topics, trainees, and practitioners. Use of #AIMedEd has been growing with 390 participants, 729 tweets, and more than 1.3 million impressions between December 3, 2020, and January 2, 2021.⁴ Using allergy and immunology hashtags can be a way

to participate in a virtual community of practice. Common hashtag use has the potential to increase the visibility of relevant posts and to strengthen the public reach of our specialty.

FIVE WAYS TO BUILD A TWITTER COMMUNITY OF PRACTICE IN ALLERGY AND IMMUNOLOGY

Twitter-based journal club and chats

Multiple Twitter-based journal clubs have formed with around 30 active in the English language at the time of this writing.^{5,6} On January 21, 2021, a new allergy and immunology journal club @AIMedEdJC was launched. Hosting a Twitter-based journal club is associated with increased page views of the discussed article online and increased Altmetric scores.⁷ A Twitter-based allergy and immunology journal club has the ability to increase the visibility of allergy and immunology as a specialty to trainees, communicate science to the public, and further the dissemination of research both within the specialty and with wider academic and practice realms. Twitter chats sponsored by JACI-IP during the COVID-19 pandemic (#JACIIPCOVID) and by the American Academy of Allergy, Asthma and Immunology (AAAAI) (#AllergyReady)⁸ and a Continuing Medical Education (CME)-eligible activity #SevereAsthmaChat have also been used successfully. Public Twitter discourse breaks down institutional and regional silos. Because didactics are in large-part virtual during the pandemic anyway, using a public platform such as Twitter for journal club discussions can improve the diversity of specialty discussions by including individuals from multiple institutions, regions, and nations.

Medical education and practice-based learning

Free Open Access Medical Education is a movement that promotes the sharing of teaching points and noncopyrighted educational materials. Although there is no guarantee that publicly sourced information has been verified, with enough participation of a specialist community, crowdsourced knowledge lends toward self-correction. Contributing teaching slides, resources, or sharing free links with relevant allergy and immunology hashtags can be a way to promote interactions, collaborations, and peer mentorship among trainees and practitioners. Interactions on Twitter can enhance educational discourse, create opportunities, and make trainees aware of advances and differences in practice style. It can also be a mode for reflective practice and role-modeling for practitioners on the platform.

Patient education and advocacy

An underappreciated facet of social media engagement on Twitter is the opportunity to engage in public education and advocacy. Other specialties have already recognized the power of

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presence on Twitter.^{5,7,9} When medical questions regarding allergy and immunology arise on Twitter, our specialty must be available to educate medical professionals and the general public with science-based explanations. Ongoing patient education efforts on Twitter include promoting appropriate food allergy test use and fighting misinformation on IgG food tests. Recent advocacy efforts also include COVID-19 vaccine promotion, addressing misinformation that impacts vaccine acceptance and rational decision-making for concerns of vaccine-associated allergic reactions.

Patients who use Twitter follow and engage with allergy and immunology practitioners to learn about treatment advances and research discoveries. Although specific medical advice should never be provided through Twitter, correcting misinformation and providing general information can improve patient education.⁸ In addition, patients frequently tweet about their diagnoses and their experiences in the health care system. Clinicians can develop greater empathy through these interactions and become proactive patient advocates and partners as a result of these interactions.

Twitter can also be used as an effective tool to contact local, state, and federal legislatures regarding specific advocacy topics. On June 3, 2020, the AAAAI hosted a virtual advocacy day focused on 3 issues: (1) supporting food allergy research; (2) advocating for HR2468 School Based Allergy and Asthma Management Act; and (3) strengthening access to telemedicine beyond the COVID-19 public health emergency. The hashtag #AIDocs was used by 47 participants with 77 tweets and 326,241 impressions. Because Twitter is a public venue, it can serve as a tool to promote public policy issues that concern the allergy and immunology community.

Research dissemination and continuing medical education

Twitter can serve as a rapid source of research dissemination. The number of tweets regarding an article within 3 days of publication has been associated with the number of times that article will be cited in the future.¹⁰ Visibility of high-impact articles and the impact of research findings increases future citations. Twitter discourse engages specialists in related fields and improves communication across specialties. Live-tweeting from national and international conferences has also become a common way to disseminate research,^{6,8} and increasingly certain groups are offering CME for participation in Journal Clubs and other Twitter-based activities.

Collaboration and community building

Twitter has the potential to engage and promote a virtual community of practice. Although annual society meetings and conferences serve as a staging ground for recruitment of trainees to the specialty, the associated financial costs of attending those meetings and time away from clinical practice and home life remain barriers. Twitter provides an opportunity to showcase the benefits and breadth of the specialty and allow learners to engage directly with specialists. A sizable presence of allergist/immunologists on Twitter may be helpful for those exploring career choices, particularly for trainees at institutions without access to allergy and immunology mentors. Community building can also occur with allied health members, such as registered dietitians, who offer expertise in areas related to allergy and immunology practice. For those already practicing allergy and immunology, social media allows continued momentum of the community

TABLE I. A selection of hashtags used in the allergy and immunology community on Twitter

Hashtag	Use
#Allergy	Allergy-related content
#Immunology	Immunology-related content
#AIMedEd	Content of interest to the allergy and immunology community
#AIMedEdJC	Monthly Twitter-based allergy and immunology journal club hashtag
#JACIIPCOVID	JACI-IP COVID Twitter chat hashtag
#AllergyReady	AAAAI-hosted Twitter chat hashtag
#Asthma	Asthma-related content
#Anaphylaxis	Anaphylaxis-related content
#DrugAllergy	Drug allergy-related content
#FoodAllergy	Food allergy-related content
#PrimaryImmunodeficiency	Primary immunodeficiency-related content
#Eosinophil	Eosinophil-related content
#AIDocs	Hashtag for a virtual advocacy day hosted by the AAAAI
#AAAAI21	This year's conference-specific hashtag for the AAAAI annual meeting
#ACAAI20	Last year's conference-specific hashtag for the ACAAI annual meeting

AAAAI, American Academy of Allergy, Asthma and Immunology; ACAAI, American College of Allergy, Asthma and Immunology.

building that already occurs in traditional face-to-face meetings. As an example, the authors of this editorial convened via Twitter to brainstorm ways to promote medical education, collaboration on projects, and professional development.

CAUTIONS

For a balanced discussion of Twitter, it is important to note that many feel that the time-cost of Twitter is not beneficial. Physicians have been harassed on Twitter both personally and/or with antiscientific dialogue as has been seen in vaccine-related discussions. Although negative attention is typically focused on very popular accounts, physicians may be recognized by their local communities even if their Twitter followings are small. To protect against certain concerns regarding harassment, it is common for some in the medical community to maintain anonymous or protected accounts.

Despite these cautionary aspects, many medical professionals engage on Twitter for the positive professional aspects. When doing so, it is important to recognize appropriate conduct that engenders trust for patients. For instance, those posting on Twitter should be aware of Health Insurance Portability and Accountability Act restrictions, medical liability, and institutional social media guidelines given the public nature of Twitter.^{6,8} Sharing real-time or identifiable patient information is inappropriate as is sharing photographs of patients without consent.

JOIN IN THE DIALOGUE

There is room for all in the allergy and immunology community to be engaged in a virtual community of practice on Twitter. For anyone new to Twitter dialogue, searching and tweeting with relevant hashtags (Table I) is a great place to start. The COVID-19 pandemic has upended traditional medical education and community building. Virtual educational venues will

continue to develop and will play an important role in the future of medical education.

WAYS TO PARTICIPATE IN A VIRTUAL COMMUNITY OF PRACTICE ON TWITTER

- Search relevant allergy and immunology hashtags and add posts to continue discussion.
- Post allergy and immunology-related content using relevant hashtags.
- Create and use a hashtag as appropriate to focus on a particular disease or practice topic.
- Participate in a Twitter-based journal club or TweetChat by posting with the related hashtag. Introducing yourself in these virtual environments can be a way to connect with others you would not meet face-to-face.

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REFERENCES

1. Feng C, Farnam K. Medical Twitter, a novel way to stay informed in allergy/immunology. *J Allergy Clin Immunol Pract* 2020;8:3669-70.
2. McLoughlin C, Patel KD, O'Callaghan T, Reeves S. The use of virtual communities of practice to improve interprofessional collaboration and education: findings from an integrated review. *J Interprof Care* 2018;32:136-42.
3. Keswani A, Brooks JP, Khoury P. The future of telehealth in allergy and immunology training. *J Allergy Clin Immunol Pract* 2020;8:2135-41.
4. Symplur. The Healthcare Hashtag Project. Available from: <https://www.symplur.com/analytics/>. Accessed January 2, 2021.
5. Hiremath S, Stoneman S. Twitter-based journal clubs: bringing critical appraisal to the social table. *Semin Nephrol* 2020;40:264-72.
6. Dimov V, Gonzalez-Estrada A, Eidelman F. Social media and allergy. *Curr Allergy Asthma Rep* 2018;18:76.
7. Wray CM, Auerbach AD, Arora VM. The adoption of an online journal club to improve research dissemination and social media engagement among hospitalists. *J Hosp Med* 2018;13:764-9.
8. Stukus DR. Using Twitter to expand the reach and engagement of allergists. *J Allergy Clin Immunol Pract* 2016;4:345-346.e1.
9. Parwani P, Choi AD, Lopez-Mattei J, Raza S, Chen T, Narang A, et al. Understanding social media: opportunities for cardiovascular medicine. *J Am Coll Cardiol* 2019;73:1089-93.
10. Sathianathan NJ, Lane R III, Murphy DG, Loeb S, Bakker C, Lamb AD, et al. Social media coverage of scientific articles immediately after publication predicts subsequent citations—#SoME_Impact Score: observational analysis. *J Med Internet Res* 2020;22:e12288.