

Social Media and the Allergist: Evidence Supports Increasing Our Engagement



Andrew S. Nickels, MD^a, Ann Chen Wu, MD, MPH^b, and David R. Stukus, MD^c *St. Louis Park, Minn; Boston, Mass; and Columbus, Ohio*

Technological innovations are rapidly changing the practice of medicine and patient experience. Electronic medical records are transforming daily work flow for providers and health care systems. Advances in imaging and data processing are expanding the utility of technology in everyday care. For patients, the democratization of information on the Internet empowers patients with knowledge and insights into their health. Mobile technology brings new possibilities into our pockets and with it, enthusiasm that these platforms will improve aspects of care such as medication adherence, disease monitoring, and outcomes.^{1,2} In this issue of the journal, Alvarez-Perea et al³ share their findings regarding an emerging innovation making its mark across all areas of medicine: social media.³

Social media encompasses both Web-based platforms and mobile applications that allow users to create personalized hubs of communication, generate original content, and share content from others. Alvarez-Perea et al's timely study investigates Twitter (Twitter Inc, San Francisco, Calif) use surrounding the Annual Meeting of the Spanish Society of Allergology and Clinical Immunology (SEAIC). Twitter is a social media platform that allows users to publish "micro-blogs," statements limited to 140 characters, which can also include links to articles, pictures, and additional content. Users can label their content using "hashtags" (#), allowing these posts to be digitally cataloged, and, more importantly, searched at any time by topic.

Using hashtags, the authors show that Twitter activity related to the SEAIC annual meeting increased significantly from 2013 to 2016, with a 10-fold increase in the number of participants and an almost 40-fold increase in the number of Tweets. "Impressions" are a common metric used for estimating the reach of social media, as each impression indicates the number of times an individual tweet or post appears within a unique user's

timeline. Alvarez-Perea et al demonstrated that impressions from the SEAIC meeting increased dramatically during their study period, culminating with more than 6 million total impressions from the 2016 meeting. Previous work has demonstrated a dramatic increase in social media engagement and escalating influence of Twitter surrounding the annual meeting of the American Academy of Allergy Asthma and Immunology.⁴ This current study suggests that social media's increasing influence is being seen in Europe as well.

Social media's role within the medical profession is increasingly being recognized. In the scholarly world, recent research suggests that social media mentions (such as Tweets or "likes" on Facebook) may predict the number of citations from published manuscripts.^{5,6} Evidence also supports that social media platforms serve as an effective tool for remaining up-to-date with the most recent medical advancements or clinical guidelines.^{7,8} Within academic centers, successful engagement with social media is increasingly becoming recognized as a useful measure of one's national reputation and is being incorporated into formal and informal criteria for the promotional review process.^{9,10} In clinical practice, social media is recognized as an important aspect of marketing and patient outreach, with national practice management organizations advocating its use.

Medicine has traditionally been a provider-driven endeavor, with the experience and knowledge of physicians driving diagnostic and therapeutic decisions. This paternalistic model of health care has rightfully fallen out of favor over the last 50 years, and medicine has evolved into a more patient-centered enterprise. Appropriately, patient self-determination is placed at the center of the health care experience and the doctor-patient relationship. There are parallels between the evolution of the doctor-patient relationship and advancements in the breadth and depth of information available via the Internet. Information technology allows motivated patients to not only empower themselves with disease-specific knowledge, but it also affords them the opportunity to share their experiences with other patients. Social media, in particular, allows patients to curate their information sources, share their own perspective and experiences in real time, receive feedback and hold conversations with others sharing similar experiences, and tailor their online presence to their preferences. In this manner, social media should be seen as a helpful tool to aid medicine's progression toward the realization of a fully shared model of care.

However, a cautionary tale also exists in this age of instant access to information. Social media content is not subject to oversight by content experts or experienced providers. There is no regulation of health-related information placed on Web sites. This creates the potential for dissemination of inaccurate information and non-evidence-based advice. An example within the

^aDivision of Asthma and Allergic Disease, Park Nicollet Health Services, St. Louis Park, Minn

^bDepartment of Population Medicine, Harvard Medical School and Harvard Pilgrim Health Care Institute, Boston, Mass

^cDivision of Allergy and Immunology, Nationwide Children's Hospital, Department of Pediatrics, The Ohio State University College of Medicine, Columbus, Ohio
Conflicts of interest: The authors declare that they have no relevant conflicts of interest.

Received for publication September 5, 2017; accepted for publication September 6, 2017.

Corresponding author: Andrew S. Nickels, MD, Division of Asthma and Allergic Disease, Park Nicollet Health Services, 3800 Park Nicollet Blvd, Suite 200, St. Louis Park, MN 55416. E-mail: anickels@alumni.nd.edu.

J Allergy Clin Immunol Pract 2018;6:313-4.
2213-2198

© 2017 American Academy of Allergy, Asthma & Immunology
<https://doi.org/10.1016/j.jaip.2017.09.007>

specialty of Allergy/Immunology includes a recently published study of visual depiction of inhalers on social media platforms.¹¹ Less than 10% of these photos included spacer use in the depiction, including photos showing active use. Beyond simple factual or content errors, there is also a growing disparity between non-evidence-based health care beliefs and evidence-based medicine. Patients can easily encounter non-evidence-based information endorsed by celebrities (including physicians with national platforms such as syndicated television shows) or anecdotal reports within social media groups that may influence their own belief system and impact their expectations of care. Examples include the vocal antivaccine movement and concerns surrounding negative effects of genetically modified products on human health.¹² As social media's influence grows and the potential pitfalls are identified, providers and professional organizations must remain aware of these trends and how they may impact patient care.

The study by Alvara-Perea et al confirms that there are a growing number of allergy experts engaging in social media and their influence can be significant. As with anything in medicine, there are best practices to be aware of, which also pertain to social media involvement. Many academic centers offer social media training for their physicians, and vetted resources can be found online as well.^{13,14} The conversation surrounding health-related information is already occurring in real time among our patients across the world. Unfortunately, the information being shared is not always correct, and is often misconstrued. With more than 300 million active users on Twitter and more than 1 billion active users on Facebook, Allergy/Immunology providers have an opportunity to not only join this conversation but also provide evidence-based information and impact health care beliefs in a positive manner.¹⁵ For those interested in joining, Alvarez-Perea et al's study shows us the power of national meetings in representing our community's voice online. It is time to merge our traditional methods of dissemination of information with current trends in communication.

REFERENCES

1. Nickels A, Dimov V. Innovations in technology: social media and mobile technology in the care of adolescents with asthma. *Curr Allergy Asthma Rep* 2012;12:607-12.
2. Wu AC, Carpenter JF, Himes BE. Mobile health applications for asthma. *J Allergy Clin Immunol Pract* 2015;3:446-8.
3. Alvarez-Perea A, Ojeda P, Zubeldia JM. Trends in Twitter use during the Annual Meeting of the Spanish Society of Allergology and Clinical Immunology (2013-2016). *J Allergy Clin Immunol Pract* 2018;6:310-2.
4. Stukus DR. Using Twitter to expand the reach and engagement of allergists. *J Allergy Clin Immunol Pract* 2016;4:345-346.e1.
5. Ringelhan S, Wollersheim J, Welpel IM. I like, I cite? Do Facebook likes predict the impact of scientific work? *PLoS One* 2015;10:e0134389.
6. Eysenbach G. Can tweets predict citations? Metrics of social impact based on Twitter and correlation with traditional metrics of scientific impact. *J Med Internet Res* 2011;13:e123.
7. Tunnecliff J, Weiner J, Gaida JE, Keating JL, Morgan P, Ilic D, et al. Translating evidence to practice in the health professions: a randomized trial of Twitter vs Facebook. *J Am Med Inform Assoc* 2017;24:403-8.
8. Maloney S, Tunnecliff J, Morgan P, Gaida JE, Clearihan L, Sadasivan S, et al. Translating evidence into practice via social media: a mixed-methods study. *J Med Internet Res* 2015;17:e242.
9. Stukus DR. How I used Twitter to get promoted in academic medicine. Available from: <http://www.kevinmd.com/blog/2016/10/used-twitter-get-promoted-academic-medicine.html>. Accessed August 21, 2017.
10. Cabrera D. Mayo Clinic includes social media scholarship activities in academic advancement. Mayo Clinic Social Media Network Blog. Available from: <https://socialmedia.mayoclinic.org/2016/05/25/mayo-clinic-includes-social-media-scholarship-activities-in-academic-advancement>. Accessed August 21, 2017.
11. Rosenzweig D, Nickels AS. #Asthma #Inhaler: evaluation of visual social media depictions of inhalers and spacers. *J Allergy Clin Immunol Pract* 2017;5:1786-7.
12. Compton J, Fanning JB, Nickels AS. Beliefs, evidence, and opportunity: genetically modified products and food allergy. *Ann Allergy Asthma Immunol* 2017;119:198-9.
13. Massachusetts Medical Society. Social media guidelines for physicians. Available from: <http://www.massmed.org/Physicians/Legal-and-Regulatory/Social-Media-Guidelines-for-Physicians/#.WY4Zu4TyUUm>. Accessed August 21, 2017.
14. Shore R, Halsey J, Shah K, Crigger BJ, Douglas SP, AMA Council on Ethical and Judicial Affairs (CEJA). Report of the American Medical Association Council on Ethical and Judicial Affairs: professionalism in the use of social media. *J Clin Ethics* 2011;22:165-72.
15. Dimov V, Gonzalez-Estrada A, Eidelman F. Social media and the allergy practice. *Ann Allergy Asthma Immunol* 2016;116:484-90.