Tweetopoiesis: A peripheral review of Twitter for hematologists

Angela C. Weyand, MD1*, Ahmar U. Zaidi, MD2,3

- 1. Division of Pediatric Hematology and Oncology, University of Michigan Medical School
- 2. Division of Pediatric Hematology and Oncology, Central Michigan University
- 3. Children's Hospital of Michigan

*Corresponding author, 1150 W. Medical Center Drive, MSRB III Room 8220E, acweyand@med.umich.edu, (734) 764-9336 (ph), (734)232-8740 (fax)

Short running title: Twitter for hematologists

Word count: 929 Figures and Tables: 0

Key words: social media, education, advocacy

Funding information: None Conflict of Interest: None Data Availability Statement:

Data sharing not applicable to this article as no datasets were generated or analysed

during the current study

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1002/ajh.26017

Doctors belong to "the great army of quiet workers" whose voices are not heard in the streets but who offer "consolation in sorrow, need, and sickness." The best doctor, then, is one of whom the public hears the least (1).

The chaos caused by misinformation in the current pandemic is unprecedented. This is a manifestation, undoubtedly, of significant changes to the way the general public accesses and processes information. With all due respect to Sir William Osler, more than a century since his statement above, there is no time more important than now for doctors' voices to be amplified, disseminated and heard. Fortunately, over the past decade, there has been increasing social media use within the medical community, mirroring that seen in the general population. Twitter, a microblogging and social networking site where users communicate in 280 character "tweets" has 330 million active monthly users, with 145 million accessing the application daily (Twitter, q1 2019). As a tool for rapid dissemination of information and collaboration, Twitter provides numerous benefits to academic and clinical hematologists, from promoting research and education to conference content distribution, advocacy, networking and collaboration.

Sharing articles via Twitter has been shown in multiple studies to increase citations with more mentions correlating with more citations (2,3). This effect is seen even prior to publication with pre-publication engagement leading to significantly more citations (4). In addition to effects on traditional metrics, the increasing use social media platforms has led to the creation of new metrics for measuring research impact. In 2010, the Altmetric scoring system was created and tracks the online influence of an article by compiling and measuring mentions across an array of platforms. In contrast to the historically used citations and journal impact factor, Altmetric scores are quicker to accumulate, can be followed over time, measure more diverse impacts, and can be applied to media outside of journals and books. However, there are limitations as Altmetric scores do not measure quality of the work and there is concern that these scores are more easily manipulated (for example, users may buy mentions) (5).

Twitter is one of the top social media platforms for medical education and is the most frequently used platform to disseminate conference content (6). Educational content on Twitter can take on many forms. Online journal clubs have arisen in many specialties and been shown to increase engagement as well as dissemination of journal articles (7). Similarly, Twitter chats, led by a moderator, provide opportunities for fast paced discussion on topics typically released beforehand. Character limitation can be overcome with threaded tweets organized into a "tweetorial" to teach core concepts, tell stories, or convey research or lectures (8). Use of the poll feature presents an opportunity for pre and post-testing on the concepts presented. Education on Twitter presents an opportunity to reach large audiences of medical and nonmedical users. To determine the reach of individual tweets as well as the Twitter account overall, Twitter incorporates an analytics tool which provides continuously updated data on user engagement. Depending on the topic and number of followers, tweets can achieve significant reach. For example, a recent tweetorial on coagulopathic complications of COVID-19 was seen by >362,000 users (impressions), with >48,000 users interacting with the tweet (engagements) and >750 retweets. The analytics tool provides real time feedback on the impact of specific tweets as well as what audience is engaging with your content.

Particularly in this increasingly 'disconnected' era of virtual conferences, we have lost personal connection. Bumping into colleagues in the poster hall, collaborators in the hotel lobby or potential mentors in a small conference room; these experiences cannot be replaced but Twitter has created the next best thing. This becomes especially important for trainees and junior faculty, where Twitter provides a platform for engagement without the typical hierarchy present in medicine. Tagging users in tweets facilitates engagement in discussion and clinical questions can be posed with weigh in from a broad swath of hematologists, including international experts, often in real time. Tweets on clinical conundrums can easily turn into multicenter collaborations. For example, a short tweet lamenting the black box warning against concomitant oral contraceptives and anti-fibrinolytics has morphed into planning an international collaborative registry. The sharing of conference content via Twitter is somewhat controversial (9) but allows users to access meeting content in real time through the use of dedicated hashtags. Conference organizers are now taking advantage of this phenomena to promote online discussion and engagement with some, including the International Society for Thrombosis and Haemostasis, appointing specific users as Twitter "ambassadors" (10). These ambassadors use the designated conference hashtag and tweet multiples times daily throughout the conference to promote engagement.

Finally, as providers who care for individuals with blood disorders, with many rare disease patient populations, amplifying our messages of health equity and reduction of stigma mandates our presence on social media platforms like Twitter. We have, as a community, successfully used social media to overturn decisions by insurance companies that make access to new medications challenging, been given spotlights on stages like TEDx to generate disease awareness and begun combating stigmas for disenfranchised groups like sickle cell disease patients. These efforts allow for unification of our voices, independent of our geographic distribution, and allow patients to be part of these conversations.

There is little doubt that Twitter will remain a fixture in the landscape of societal communication, which makes the involvement of hematologists in this space necessary. We have everything to lose by not making our voices heard and amplified for the betterment of our patients, our careers and our ongoing pursuit of knowledge.

References

- Counsels and Ideals from the Writings of William Osler, Sir William Osler, Houghton Mifflin, 1908.
- Luc JGY, Archer MA, Arora RC, Bender EM, Blitz A, Cooke DT, Hlci TN, Kidane B, Ouzounian M, Varghese TK Jr, Antonoff MB. Does Tweeting Improve Citations? One-Year Results from the TSSMN Prospective Randomized Trial. Ann Thorac Surg. 2020 Jun 3:S0003-4975(20)30860-2. doi: 10.1016/j.athoracsur.2020.04.065. Epub ahead of print. PMID: 32504611.
- 3. Hayon S, Tripathi H, Stormont IM, Dunne MM, Naslund MJ, Siddiqui MM. Twitter Mentions and Academic Citations in the Urologic Literature. Urology. 2019 Jan;123:28-33. doi: 10.1016/j.urology.2018.08.041. Epub 2018 Sep 29. PMID: 30278190.
- Paradis N, Knoll MA, Shah C, Lambert C, Delouya G, Bahig H, Taussky D. Twitter: A Platform for Dissemination and Discussion of Scientific Papers in Radiation Oncology. Am J Clin Oncol. 2020 Jun;43(6):442-445. doi: 10.1097/COC.0000000000000685. PMID: 32167936.
- 5. S Elmore. The altmetric attention score: what does it mean and why should I care? Toxicol Pathol, 46 (2018), pp. 252-255
- Sterling M, Leung P, Wright D, Bishop TF. The Use of Social Media in Graduate Medical Education: A Systematic Review. Acad Med. 2017 Jul;92(7):1043-1056. doi: 10.1097/ACM.00000000001617. PMID: 28225466; PMCID: PMC5487290.
- 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: pp. 764-769.
- 8. Breu AC. From Tweetstorm to Tweetorials: Threaded Tweets as a Tool for Medical Education and Knowledge Dissemination. Semin Nephrol. 2020 May;40(3):273-278. doi: 10.1016/j.semnephrol.2020.04.005. PMID: 32560775.
- Light D, Pawlak M, de Beaux A, Brady RR. Is sharing speaker's slides from conference presentations on social media a breach of intellectual property or a delegate's right? Depends who you ask. Int J Surg. 2018 Oct;58:22-25. doi: 10.1016/j.ijsu.2018.08.010. Epub 2018 Aug 29. PMID: 30172076.
- Aggarwal NR, Bullock-Palmer RP. The voyage: Amalgating a social media platform through the annual scientific meeting. J Nucl Cardiol. 2020 Feb;27(1):18-24. doi: 10.1007/s12350-019-01983-7. Epub 2019 Dec 16. PMID: 31845309