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Brief Opinion

The 2017 American Society of Radiation Oncology (ASTRO) annual meeting: Taking a deeper dive into social media

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Introduction

In June 2017, the board of directors of the American Society of Radiation Oncology (ASTRO) revised and updated the organization's strategic plan. The directors reiterated that the core purpose of the organization is to advance the field of radiation oncology, and the overarching vision is that the field should be a recognized leader in quality, innovation, and value in multidisciplinary cancer care.[1] The strategic plan would be operationalized through 4 major areas of focus, the first of which was to "elevate the profile of the field" for the purpose of establishing radiation oncology as an equal partner in the field of cancer.

One barometer of public exposure of the field of radiation oncology is the depth of penetration into social media, defined as tools for electronic communication.[2] The aspirational goals of a national medical conference are to provide education, networking opportunities, and access to the latest technology for improving patient care. Professional medical societies have begun to explore how best to incorporate social media to augment these missions, and metrics of social media activity related to a society's meetings might provide insights into the quantity of communications connecting attendees and other interested stakeholders in the general public.

In the present report, we offer preliminary subjective and objective observations about the extent of the social media activity generated in association with the 2017 Annual Meeting of ASTRO and compare findings with prior ASTRO Annual Meetings and with the activity generated by selected other annual medical conferences.

Background

Historically, the research presented at an academic meeting was only readily available to attendees and subscribers to the journal that prints conference abstracts. With social media, the audience for research communications is scalable from hundreds to potentially millions.[2] Information can be transmitted immediately to the public. Any attendee can photograph a PowerPoint slide or quote a presenter. Within seconds, embargoed research information is available on the Internet. This paradigm shift raises important issues with regard to the protection of intellectual property and free discourse at academic meetings.[3,4] However, social media also expands the meeting audience to many people who traditionally were otherwise excluded, even if unintentionally.

ASTRO has for several years maintained a presence on Facebook and Twitter and primarily used these forums to disseminate updates of its educational programs and guideline statements, breaking news on political issues that affect

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its government relations activities, activities of the science council, and other messages that align with the organization's mission and strategic plans.

The ASTRO Annual Meeting is the society's most important annual event and attracts more than 11,000 attendees per year. Most registrants are radiation oncologists, medical physicists, and other health professionals who work in the field, but industry representatives also attend. Many of the attendees have a Twitter account through which they follow others and/or interact. Most meetings, including ASTRO's, now use a hashtag to highlight educational content or research. People can now follow a live stream of content by tuning into a specific hashtag. While ASTRO attendees are sharing, cancer patients, advocates, and others can ask questions and give their opinions. By using the #ASTRO17 hashtag, these individuals could become part of the conversation.

For the 2017 meeting, ASTRO designated a group of social media-savvy individuals (including author M.A.K.) to be #ASTRO17 social media ambassadors. These ambassadors were assigned the task of attending as many educational sessions as possible and then tweeting updates at the meeting, such as pictures of colleagues, highlights of scientific presentations, and any other interesting observations from the convention center or surrounding venues. ASTRO selected Twitter for its ease of use, readily available quantitative usage metrics, and ability to transmit information to the public, including health journalists. Importantly, for the first time ever, ASTRO tracked and collected data on #ASTRO17 metrics.

The 2017 ASTRO Annual Meeting was constructed with awareness of and integration with social media. Two of the keynote speakers, Drs. Vinay Prasad (@VianyPrasad82) and Lucy Kalanithi (@rocketgirlmd), each have more than 15,000 followers on Twitter. The presidential address was intentionally infused with popular Internet memes to illustrate various points in a "tweet-ready" manner.

Here, we report the data regarding tweet activity for #ASTRO17. We looked at tweet activity, number of participants, and potential reach (impressions) for #ASTRO17 using Symplur.com, an organization that collects application program interface data on tweets with hashtags submitted to the website. We also collected archived data from 2012 to 2015 in the spring of 2016, when the website made all data freely available. Data for #ASTRO16 and #ASTRO17 were collected in November 2016 and October 2017, respectively. We also identified examples of how using social media had a qualitative beneficial impact upon the meeting.

Results

The number of tweets for the ASTRO Annual Meeting was compared with 4 other annual meetings, including the American College of Surgeons (ACS), the American Society of Clinical Oncology (ASCO), the Radiological Society of North America (RSNA), and the American Urologic Association (AUA) (Fig 1). The total number of Twitter impressions for #ASTRO17 was 8,220,000. There were 861 participants and 3181 tweets.

Many radiation oncologists were able to participate in #ASTRO17 remotely, including international physicians. Three of the top 10 people sharing #ASTRO17 were

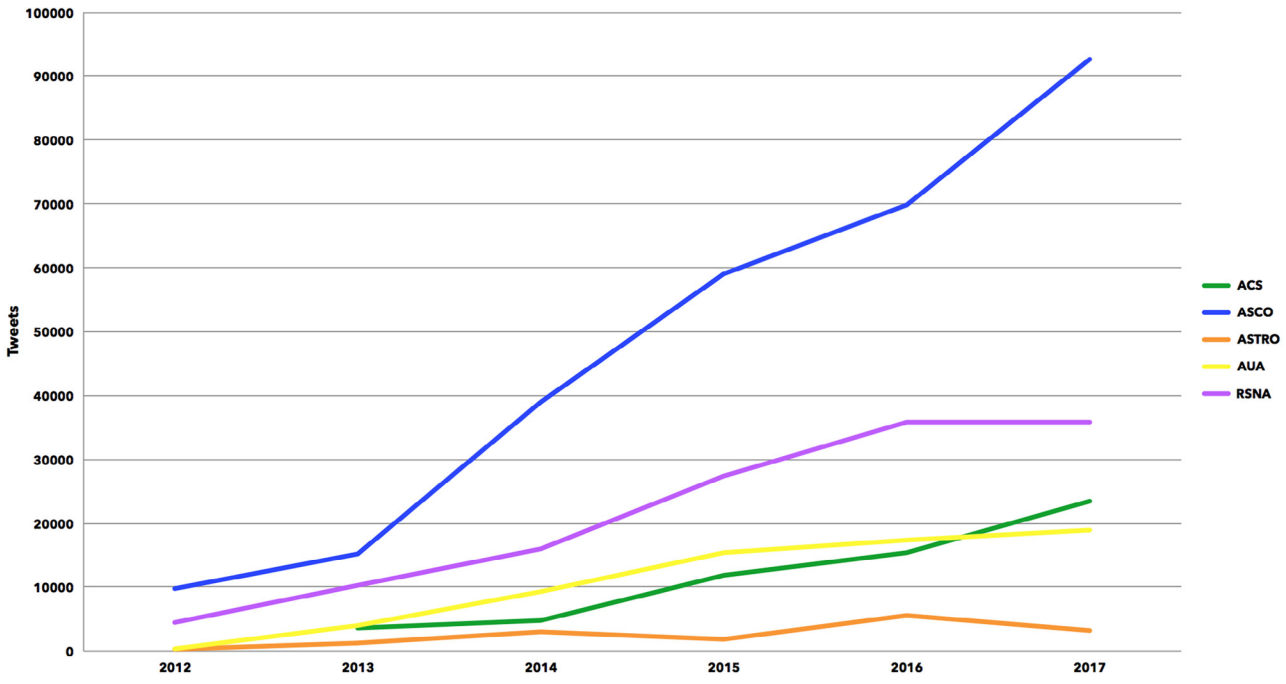

Figure 1 Twitter activity at academic annual meetings.

radiation oncologists tweeting from Spain, who were not at the meeting. Leading academics who were not able to attend added context and depth to discourse remotely. For example, between seeing patients, Dr. Ralph Weichselbaum engaged in a real-time, Twitter-based conversation with meeting attendees from Chicago while his findings were discussed during the presidential address.

We observed that social media can help individuals personalize distant relationships by meeting face to face. At the meeting, many attendees came to this year's #ASTRO17 Tweet Up, which occurred at a designated time and place. Some people who knew each other only through Twitter were able to meet in person. For U.S. and international attendees alike, ASTRO's Annual Meeting was an opportunity to meet colleagues, network, and expand connections that may have started online.

Although the annual meeting was geared toward radiation oncologists specifically, social media promoted discussion among physicians in other oncology specialties. This year, for example, radiation oncologists tweeting at #ASTRO17 allowed thoracic surgeons Dr. Raja Flores from Mount Sinai Medical Center (NY) and Dr. Brendon Stiles from Weill Cornell (NY) to comment on controversial topics such as stereotactic radiation therapy for patients with operable lung cancer. At a specialty-specific meeting, multidisciplinary interactions can promote transparent debate and lessen confirmation bias that may occur.

We also noted that Twitter could be used to engage potential patients, cancer advocacy groups, and networks from around the world and educate them on cancer treatment.[5] By using the #ASTRO17 hashtag, they could become part of the conversation.

Finally, Twitter allowed people with related interests who were attending the same meeting to connect for other reasons. For example, female oncologists who were members of the Hematology and Oncology Women's Physician Group on Facebook, a group of 821 female oncologists from all oncology-related specialties, made plans to meet for dinner while attending ASTRO. This event fostered invaluable relationships and soon thereafter led to the creation of the Radiation Oncology Women Physicians Group on Facebook.

Discussion

ASTRO's Annual Meeting brought together more than 11,000 individuals from around the globe. One of the goals of an academic medical conference is to promote a robust community of interest among physicians, researchers, and other health professionals. Increasingly, it is apparent that academic meetings are an opportunity to expand interest in radiation oncology and cancer research. Among several comparison groups, the ASTRO Annual Meeting generated the fewest activity on Twitter; however, it should be appreciated that ASTRO also has a smaller number of attendees than the comparators. For example, for their 2017 annual meetings, the total number of registrants for each meeting was as follows:

Radiological Society of North America	48,445
(This represents advanced registration; however, final registration data for 2017 were not yet available. For 2016, the total number of RSNA meeting registrations was 54,037.)	
American Society of Clinical Oncology	39,400
American Urologic Association	16,717
Radiological Society of North America	11,366
American College of Surgeons	11,200

Nevertheless, the relationship between attendees and total number of tweets is not closely correlated, and there is a clear suggestion that by this individual Twitter metric, the volume of social media interactions generated by the ASTRO Annual Meeting was proportionally less than what was generated by these other society meetings.

Possible reasons for this difference in quantity of activity relative to attendance numbers include a lower number of ASTRO members who actively participate in social media and subject matter that did not generate a high level of interest outside the field. There is also the possibility that ASTRO members did not feel comfortable using Twitter or other social media to discuss meeting content. Some of the material presented at the meeting might seem too complex to discuss in short tweets, and some of the material might risk shedding unfavorable light on the field if not framed in the proper context.

Call to action

The field of radiation oncology appears to be less engaged as a whole in at least 1 high-profile area of social media, namely the use of Twitter. As ASTRO continues to pursue its revised strategic plan, including a focus on elevating the profile of the field, it will be interesting to see if social media engagement metrics suggest progress in that regard, and this year's metrics will serve as a baseline for future comparison. The ASTRO Communications Committee was recently charged with providing some basic guidance on the use of social media in a professional setting that might be informative and helpful. Furthermore, ASTRO plans to facilitate continued social media use at its future annual meetings by including the meeting hashtag on more presenter slides and posters and expanding its social media ambassador program.

In the interim, individual radiation oncologists are encouraged to become literate in the use of various forms of social media for the purpose of bolstering a robust communications network within and beyond the field of

radiation oncology. For those interested in joining Twitter, a previous publication of this journal (co-authored by M.K.) serves as an excellent guide for beginners.[6]

References

1. American Society of Radiation Oncology. ASTRO Strategic Plan. https://www.astro.org/Strategic-Plan.aspx. Accessed December 6, 2017.
2. Merriam-Webster. Definition of Social Media. 2017, September 27. https://www.merriam-webster.com/dictionary/social%20media. Accessed December 6, 2017.
3. Bik HM, Goldstein MS. An introduction to social media for scientists. *PLoS Biol*. 2013;11:e1001535.
4. Groves T. Tweeting and rule breaking at conferences. *BMJ*. 2016;353:i3556.
5. Patel SS, Majhail NS. Twitter use in the hematopoietic cell transplantation community. *Curr Hematol Malig Rep*. Accessed December 6, 2017. [Epub ahead of print].
6. Bibault JE, Katz MS, Motwani S. Social media for radiation oncologists: A practical primer. *Adv Radiat Oncol*. 2017;2:277-280.