Women in Radiology: Creating a Global Mentorship Network Through Social Media

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DESCRIPTION OF THE PROBLEM

Despite efforts to attract more women into radiology, the field remains heavily male dominated. Currently, only 21% of the radiology workforce is female [1]. Additionally, current female resident numbers have remained relatively stable in recent years [2], with only 26% of radiology residents identifying as women [3]. In these circumstances, developing mentorship with other women may be challenging given the paucity of female radiologists. Mentorship has been identified as a key element for a successful career [4], and studies have shown that mentoring is instrumental in women’s professional choices [5].

Given these challenges, Twitter is proving to be an effective way to improve access to mentorship by promoting a culture of inclusivity and creating a community to empower female radiologists. Twitter is a microblogging platform that currently has more than 500 million users worldwide [6]. This platform allows the creation of a virtual community where users can share ideas and experiences with a broad audience [7]. A newer movement on Twitter is tweet chats, which provide an opportunity for more directed dialogue. Tweet chats allow scheduled real-time conversations addressing particular topics, effectively creating a back-and-forth exchange of instant interaction, thoughts, and ideas on Twitter. Tweet chats usually last 1 hour and are based on a question-and-answer format with four or five predetermined questions put forth by a moderator. Although this tool has been applied for the discussion of medically related topics, it had not been used specifically to connect women in radiology.

WHAT WAS DONE

A three-part series of tweet chats with topics centered on women in radiology was undertaken.

At the RSNA annual meeting in November 2016, Ambra Health (New York, New York), a medical data and image management cloud software company, launched the RADWomen initiative, otherwise known using the hashtag #Radxx on Twitter. This movement focuses on fostering networking and mentorship opportunities for women involved in radiology, informatics, and radiology systems IT management. Ambra Health hosts a repository of machine learning and other informatics resources. Additionally, since its initiation, Ambra Health has hosted two #Radxx tweet chats to connect female radiologists through social media.

The first tweet chat was held on December 21, 2016, from 12 to 1 PM Eastern Standard Time. This particular time was selected to allow broader participation across time zones given and anticipated differences in work responsibilities. The topics were “Breaking Down Barriers for Women in Informatics” and “Change the Future Face of Radiology.” The participants focused on how to recruit female medical students to radiology by making female radiology leaders more visible and accessible. The differences between a mentor and a sponsor were also discussed, and participants created a list of female radiologists via Twitter using the #Radxx hashtag. Other issues briefly discussed related to bullying in medicine, the implications of changing last names for women, and potential topics for future chats.

The “Mentorship, Sponsorship, Informatics & Women in Radiology” tweet chat occurred on May 10, 2017, from 4 to 5 PM Eastern Standard Time to discuss personal mentorship experiences, including questions relating to tips for successful sponsor or mentor relationships. Participants were asked their opinions...
on what had been the number one resource that helped open doors in their careers. Also discussed was the new Ambra Health #Radxx resource site, radxx.ambrahealth.com, #Radxx-sponsored events such as a cocktail event at RSNA, and workplace-taboo topics.

From the #RADWomen initiative stemmed a collaboration with the Society of Breast Imaging and American Association for Women Radiologists, which resulted in the #RadWomen tweet chat, held on International Women’s Day. The tweet chat “RadWomen: Past, Present and Future” was held on March 8, 2017, from 1 to 2 PM Eastern Standard Time. This chat discussed challenges that women in radiology face under the hashtags #RadWomen and #BeBoldForChange, one of the official hashtags for International Women’s Day. Participants discussed their inspiration for following a path in radiology as well as who had inspired them to pursue a career in radiology. Questions included “Did you have a mentor?” “What were some of the challenges or barriers that you faced to advance in radiology and how did you overcome them?” “What progress have you seen in radiology to include more women?” “How can we empower more women to be #BoldForChange, enter radiology, and hold leadership positions?” “What challenges will women face upon entering radiology?” and “What advice would you give someone considering a radiology career?” A robust and inspiring discussion took place; more details are available online [8].

OUTCOMES
Since RSNA 2016, two hashtags dedicated to women in radiology have been created: the general hashtag #RADwomen and the more specific hashtag #Radxx, which seeks to support female radiologists involved in informatics. Furthermore, both of these hashtags are formally a part of the radiology hashtag ontology. The use of these hashtags helps communities form and grow on Twitter, making content sharing easier and posts traceable. Using Symplur (Los Angeles, California), a health care social media analytics company, specific information regarding these three tweet chats was studied to determine participation and potential impact.

Regarding the tweet chat held in December 2016, 472 tweets with the hashtag #Radxx were generated by 39 participants, for an average of 12 tweets per participant (Fig. 1). The top 10 tweeters generated 367 posts, accounting for just under 78% of all content. Over the hour-long tweet chat, 2.3 million impressions were generated, defined as the number of times tweets were included on users’ timelines. The March 2017 tweet chat drew a total of 69 participants, generating 620 tweets and 1.8 million impressions under the hashtag #RadWomen (Fig. 2). The top 10 tweeters generated 373 tweets, for 60% of total content posted. The May 2017 tweet chat included 34 participants generating 452 tweets, for an average of 13 tweets per participant. This created 1.9 million impressions (Fig. 3). The top 10 tweeters accounted for 364 posts, or

![Tweet Activity on #RadXX](Fig 1. Tweet volume over time during the December 2016 tweet chat, which was held from 12 to 1 PM Eastern Standard Time. Source: Symplur Signals, a health care social media analytics platform, accessed May 25, 2017.)