The emerging role of professional social media use in oncology

Mina S Sedrak¹, Don S Dizon², Patricia F Anderson³, Michael J Fisch⁴, David L Graham⁵, Matthew S Katz⁶, Jennifer C Kesselheim⁷, Robert S Miller⁸, Michael A Thompson⁹, Audun Utengen¹⁰ & Deanna J Attai^{*11}; for the Collaboration for Outcomes on Social Media in Oncology (COSMO)

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The use of social media continues to increase steadily. Current surveys estimate that approximately 70% of the US population use social media to interact with people, engage with news content, share information and/or for entertainment [1]. Unlike traditional modes of communication such as radio or print media that provide one-way transfer of knowledge and information, social media platforms such as Facebook and Twitter offer the opportunity to connect with a larger audience through participative communication; one

where users can create, share and interact with content [2].

Cancer patients and caregivers are increasingly using social media to interact with each other and with oncology professionals, form communities and receive and obtain credible information about their health or that of their loved ones [3]. Given this increased utilization, there is a growing interest for oncology providers to use social media professionally [4,5]. However, only a minority of physicians actually use social media for professional purposes [6].

KEYWORDS

- communication • digital engagement • health information • health professionals • patient–physician relationships • professionalism • public health • social media • technology

¹Department of Medical Oncology and Therapeutics Research, City of Hope, CA, USA

²Clinical Co-Director, Gynecologic Oncology and Director, The Oncology Sexual Health Clinic, Massachusetts General Hospital, MA, USA

³Taubman Health Sciences Library, University of Michigan, MI, USA

⁴Department of Medical Management, AIM Specialty Health, IL, USA

⁵Levine Cancer Institute, NC, USA

⁶Department of Radiation Medicine, Lowell General Hospital, MA, USA

⁷Department of Pediatric Oncology, Dana-Farber/Boston Children's Cancer & Blood Disorders Center, MA, USA

⁸Vice President and Medical Director, CancerLinQ, American Society of Clinical Oncology, VA, USA

⁹Aurora Research Institute, Aurora Health Care, WI, USA

¹⁰Product Research and Development, Symplur LLC, CA, USA

¹¹Department of Surgery, David Geffen School of Medicine at University of California Los Angeles, CA, USA

*Author for correspondence: Tel.: +1 818 333 2555; dattai@mednet.ucla.edu

Integrating social media into oncology can potentially improve patient care and increase trust in the profession. It can also be used to enhance provider education, create opportunities for academic or professional advancement and disseminate new clinical research insights. However, there are concerns inherent to social media use that health professionals must anticipate and address proactively, including protecting patient's and physician's privacy, disclosing conflicts of interest and delineating personal and professional identities, among others.

Benefits of professional social media use

• Improved patient care & trust in the profession

Patients and caregivers are increasingly turning to social media for health purposes. Research shows that patients have critical health information – about themselves, about each other and about treatments – and they are using these new participative communication channels to share what they know to help themselves and others [7,8]. As patients move through the cancer continuum from diagnosis to treatment and survivorship, sites such as Facebook, Twitter, blogs and other platforms are uniquely suited to foster engagement of people or organizations with similar interests and facilitate emotional and informational support [9,10]. Cancer-specific online communities on Twitter, composed of diverse stakeholders including patients, families, health-care providers, advocates and policy makers, are flourishing [11]. PatientsLikeMe.com, a health data-sharing platform, is another example of an organization using the Internet to help patients with the same conditions and their caregivers to find one another and connect online [12].

Although access to online health information curated by peers can be important, over 90% of the public report that they trust doctors for health information, which is far higher than public trust in the internet at large (66%) or even in family and friends (55%) [8]. Furthermore, real-time access to information is a hallmark of our time. When competing with the instantaneous and sometimes inaccurate information a patient can get from a Google search, the promptness with which a physician can respond becomes paramount. As such, provider's presence on social media may therefore serve as an important way to improve patient care and further cultivate trust. By meeting patients in an online environment, with its immediacy and responsiveness,

providers can correct misinformation and redirect patients to accurate, reliable resources. For example, physician participation in the #BCSM (Breast Cancer Social Media) Twitter community has allowed physicians to correct inaccurate information and misconceptions in real time and has demonstrated enhanced patient education regarding evidence-based treatments and guidelines [9].

Providers' use of social media professionally may also strengthen the patient–physician relationship. Providers' online accessibility can benefit patient insight, therapeutic alliance and treatment adherence, among other things. These potential patient-related benefits suggest that there might be an emerging professional advantage for provider engagement on social media in cancer care. However, because providers possess varying levels of familiarity and comfort with social media tools, further efforts are needed to help understand how providers can effectively utilize them professionally.

• Networking, education & opportunities for professional advancement

Social media can be used to extend one's own professional network, outside of the confines of a specific university, practice site or conference, by allowing users to find and connect with other like-minded users and thus build virtual professional learning networks. In the USA, for instance, www.Doximity.com is an online social networking service specifically for doctors and clinicians [13]. Primary care providers can use this network to find a specialist for patient referral or to connect with colleagues for case discussion in an Health Insurance Portability and Accountability Act (HIPAA)-compliant manner [14]. Since its launch in 2011, Doximity's network now includes more than 800,000 licensed medical professionals, and reaches 70% of the US doctors [15]. For oncology providers, participation in Doximity or other closed physician-only sites have several benefits such as opportunities for collaborative research, idea sharing, awareness of teaching and speaking engagements, among others.

Additionally, engagement online can help contribute to an oncology provider's own continuing education. Launched by a group of hematology–oncology physicians in training interested in bone marrow transplant and associated diseases, the Online Bone Marrow Transplant Journal Club, www.bmtojc.net, is held quarterly for

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fellows on a Google hangout with live streaming, archiving on YouTube and simultaneous discussion on Twitter [17]. Many medical journals and organizations have also started to hold online journal clubs on Twitter [16]. These online social media platforms enable easy sharing of ideas, opinions, multimedia resources and references. In addition, online journal clubs offer several advantages over traditional in-person journal clubs. Twitter brings together participants with diverse experiences and perspectives, bridging geographic barriers and provides an infrastructure that allows researchers – who are often key guests on these online journal clubs – to directly connect with their readers, as well as patients [16]. Using Twitter professionally is an opportunity for providers to connect with leaders in the field and engage with researchers to stay informed and up-to-date with new guidelines.

Finally, social media can be used to advance one's professional career goals, whether it be research, public policy outreach, medical education expertise or excellent patient care. Several prominent academic centers, such as the University of California, San Francisco, now link faculty member's Twitter feeds to their professional website page, and the Fox Chase Cancer Center lists medical oncologists on their Pinterest site. Linking professional faculty biosketch websites to their social media accounts can create opportunities for professional development, increased collaborative research and speaking engagements. The Mayo Clinic, in fact, is considering social media scholarship activities for academic advancement [18]. These examples highlight the evolving role that social media is starting to play in academic and professional arenas.

• Disseminate new clinical research insights

Implementation of evidence-based practices is a critical priority in oncology. However, in part due to the volume of information published daily, limitations currently exist in clinicians' ability to learn about new research, critically appraise it and adopt it in medical practice in a timely and effective manner [19]. Professional social media use can be a highly effective and efficient means for oncology providers to filter, disseminate and discuss new cancer research findings and their implications for clinical practice. Scholarly engagement through participation and online interaction with critical clinicians, translational teachers and interactive investigators has been proposed as a promising way to facilitate evidence-based medicine

by enhancing the appraisal and translation of research in practice [19].

Twitter has been shown to be an important communication tool among oncologists to share and discuss research findings at scientific conferences [20,21]. The number of unique healthcare conference hashtags has increased from 1428 in 2014 to 2282 in 2016, demonstrating that scientific meeting organizers across medical and surgical subspecialties are seeing a value in promoting the work presented on social media [22].

Furthermore, recognizing the importance of social media in helping to disseminate research and scientific findings, the American Society of Clinical Oncology has had a Social Media Working Group in place since 2014 to help inform the organization's online guidelines and policies, and to develop targeted dissemination of the research that is taking place within the organization. Similarly, the Collaboration for Outcomes on Social Media in Oncology (authors of this paper) was developed to investigate, describe and inform the cancer community of the potential value of cancer communication in the social media age. Collaboration for Outcomes on Social Media in Oncology also aims to better understand how we can use these new platforms to effectively disseminate new research insights and improve adoption of evidence-based guidelines in clinical practice.

Risks of professional social media use

• Privacy

Professional social media use gives rise to significant ethical issues, such as protecting patient and physician privacy, that must be considered by providers adopting these new platforms [6,23]. However, many of these ethical issues are not entirely novel. Interestingly, the invention and adoption of the telephone in the 19th and 20th centuries brought about similar issues regarding privacy, availability and the physician–patient relationship [24].

Violating patient privacy is certainly a risk of provider social media use, but it is the authors' opinion that this should never occur. While certain forums, such as Doximity, allow for patient case discussion in an HIPAA-compliant, physician-only environment, platforms such as Twitter are open to all and posts should never be considered private, even if the physician only has a handful of followers, or has privacy settings enabled. For that reason, physicians should refrain from social media interactions targeted at

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their own specific patients. Similarly, individual patient cases should never be discussed in non-secure online forums, and providers should use great caution in sharing clinical details about specific patient cases, even without supplying names or other protected information, if the patient identity could be inferred. New and emerging platforms, such as Tele-oncology, may provide an HIPAA-compliant and potentially billable mechanism to move some patient–physician discussions from social media to a more private, compliant setting [25].

Providers need to be keenly aware of privacy and security implications around their use of social media. By affirming a commitment to privacy, performing self-audits to monitor their professional online presence, maximizing online privacy settings for personal profiles and understanding that all posted content should be considered public, providers can address some of the privacy challenges inherent to these online communication channels.

• Transparency

As providers embrace social media professionally, failure to disclose and manage conflict of interest threatens both patient care and trust in the profession [26]. A recent study evaluated the Twitter accounts of 634 US-based hematologist–oncologists found that 79.5% have some financial conflict of interest, ranging from more than \$100 (received by 62.6%) to more than \$1000 (received by 44.3%) [27]. This exploratory study raises an important question: how should financial conflict of interest be disclosed and managed in an age in which information, interpretation and criticism associated with cancer products and practices are increasingly available on social media?

Lack of transparency among users on social networking sites could result in biased treatment recommendations obtained via online consultation. By way of example, suppose an oncologist seeks advice for third-line treatment of metastatic breast cancer and receives a recommendation for bevacizumab from another provider who has financial ties with the pharmaceutical distributor, but has not disclosed it online. Arguably, the provider should be obligated to divulge the conflict so that the oncologist can consider the financial tie when evaluating the recommendation. Conflict can bias the educational experiences and informational support provided on social media sites and could lead to unintended future consequences [26].

• Blurred boundaries between professional & personal identities

Another common concern is that social media use blurs personal and work identities. A single unfortunate post, even if made on a site that is clearly personal in nature, can have negative consequences on one’s image and possibly their career. So how can providers balance their personal and professional online use?

One approach is to develop what Mostaghimi and Crotty have described as ‘dual citizenship’ online, with separate professional (public) and personal (private) networking profiles [28]. The dual-citizenship approach can help providers manage a professional image online, which is separate from their private identity. In a separate professional context, providers can manage their audience (deflect a patient request from a personal Facebook and direct it instead to a professional Twitter account) and content (carefully tailor their posts and online dialogs to their self-identified professional image, and avoid sharing too many party and baby pictures).

While this strategy can be implemented by creating multiple accounts, this will require additional time and energy to maintain and, to some extent, crossover is inevitable. In addition, DeCamp *et al.* have noted that separating personal and professional identities is ‘operationally impossible’ and probably undesirable for most [29]. Rather, the test they suggest is for a user to assess in advance whether any piece of potential social media content is suitable for a public space in the first place, and not attempt to categorize it as personal versus professional. In this approach, one must recognize that social media exists in primarily public places and to consider any online content as professional. Thus, truly personal content is simply never shared online. While restrictive, it provides a potential solution that allows oncology professionals to maintain a unified persona.

Whether the dual citizenship or single professional model work better is unknown. Much of this depends upon the goals and personality of each professional deciding how to be more involved online.

Conclusion

In this article, we attempted to identify the benefits and the inherent risks of professional social media use among oncology providers. Further research is needed to better understand the value and application of social media in cancer care

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delivery and how providers can leverage it appropriately and professionally. As both technology and the culture of medicine evolve, it is our perception that social media engagement may be a valuable tool to advance their own professional growth and foster patient engagement and education. We encourage providers to get online, to explore how to develop a professional social media presence and to engage in this ongoing evolution as we continue to optimize social media communication in oncology.

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