

Opportunities and ethical challenges for the practice of medicine in the digital era

Patrick D. Herron

Published online: 20 March 2015
© Springer Science+Business Media New York 2015

Abstract Technological advances have been a driving force in the practice of medicine. From the discovery of x-rays' medical applications to the utilization of dialysis and surgical transplantation of organs, technology has presented new opportunities, and at times, ethical challenges for physicians. In recent years, the increased proliferation of social media tools has had a significant impact on how people engage with one another, and how they want to engage with their healthcare providers. Medical schools have begun to examine some of the issues surrounding use of social media in the context of professionalism in their curricula. Many of the physicians already in practice are left to grapple with how to learn about and wield social media in not only a professional capacity and their personal lives, but often where the two intersect. This paper will explore both opportunities for social media engagement and ethical concerns such usage presents to physicians and in particular to those in the field of musculoskeletal medicine.

Keywords Social media · Ethics · Bioethics · Orthopedics · Professionalism · Technology

Introduction

Physicians sometimes find the landscape of social media to be unfamiliar and difficult to navigate due to its ever-changing structure, and the variations in how the term itself is defined.

This article is part of the Topical Collection on *Ethics*

P. D. Herron (✉)
Department of Family and Social Medicine, Albert Einstein College of Medicine, 1300 Morris Park Avenue, 2A-26 Van Etten Building, Bronx, NY 10461, USA
e-mail: patrick.herron@einstein.yu.edu

Social media can be described as a set of technology tools that are just as they sound; mediated opportunities for bringing people together and encouraging networking and dialogic communication [1]. The types of social media platforms used most frequently continue to evolve, but among the more common examples today are blogs (e.g., www.kevinmd.com), social networking sites (e.g., Facebook, LinkedIn), microblogs (e.g., Twitter, Tumblr, FourSquare), and photo/video sharing sites (e.g., YouTube, Instagram, Flickr). One of the reasons for its popularity is that social media is immediate, and communications can be instantaneous, unlike traditional print media where lag time can be days to weeks [2•]. Social media as a tool can have greater impact as it facilitates not just one-to-one connections, but one-to-many connections [3••]. Described once as a form of disruptive technology [4], social media has at times been resisted by healthcare providers struggling to come to terms with how social media has changed the practice of medicine. Exploring the opportunities presented by social media for healthcare providers and reflecting on some of the ethical concerns raised by this tool is an ongoing process. It is and should be a shared process, since the technology is built upon social connections.

Opportunities for engagement

Before there was social media, the Internet brought forth the digital era. It created greater access to information for all humankind, and in particular, health information for patients. The technology initially was one directional though, with patients being able to only receive content. Social media created a multidirectional process, whereby individuals could access and share information interactively. These patients are sometimes referred to as “e-Patients;” as “educated” people who are “empowered” and “engaged” by the ability to contribute to their own healthcare, accessed in real time, by many different

mobile formats [3••]. Physicians practicing today must learn or relearn how to interact with such patients, so that the care provided to them can be maximized. Just as there is great variability among the types of social media platforms, the interests and needs of patients for using social media vary too. Among orthopedic patients, a recent study [5•] showed that there were differences among social media utilization across subspecialties. Data supported the view that patients who use social media were likely to be younger, had researched their condition online prior to appointment, and traveled further to receive care from the physicians participating in the study. Among the subspecialties, sports medicine patients had the greatest percent of social media users versus patients being seen for joints/tumors. The same study noted that up to 26 % of patients utilized a physician rating website service (e.g., healthgrades.com; vitals.com).

Websites that offer patient satisfaction data are looked upon by physicians as being largely subjective, inaccurate, and not true indicators of a physician's qualification or the quality of care patients receive. Statements made online by patients may be biased and could be professionally harmful without fair recourse for physicians who have not agreed to participate with such web services. The need for online reputation management to monitor, address, and mitigate what is said about you online has become ever more important today. Some physicians fear that engaging online through social media leads to such negativity and potential public relation issues. All physicians are susceptible to such circumstances, and the only effective means to protect your online reputation is to take control of your digital identity online. Dr. Howard Luks, an Orthopedic Surgeon specializing in Sports Medicine, has written extensively on his blog (<http://www.howardluksmd.com>) about the need for social media engagement among healthcare professionals. When thinking about patients looking for information online, they are “not only assessing your qualifications, they are looking for stories; they are looking for videos; they are looking for clues as to who you are; and whether or not, a visit to you is worth their time” [6•].

Traditionally, professional development opportunities took place through attendance at conferences and through continuing medical education (CME) courses. Many professional conferences have begun to embrace social media to not only promote their events, but also to increase participation through live streaming of sessions for those not in attendance and encouraging attendees to tweet and blog about the sessions taking place there. Recording presentations and posting to video streaming sites, such as YouTube, also increases the reach and ability to engage with healthcare providers. There are even resources for specific surgical techniques that can be shared and allows for CME credits to be earned. Created in 2008, VuMedi has promoted itself to be “the largest community in the world of orthopedic surgeons, interventional cardiologists, neurosurgeons, and other physicians” [7]. Members

have the opportunity to watch posted surgical demonstration videos, interact with other members, and participate in online webinars. The ease of access for those physicians located in rural areas or without the financial means to attend professional conferences can help address gaps in expertise across the profession; gaps that sometimes contribute to healthcare disparities for patients located far away from large academic medical centers.

Since its launch in 2006, Twitter has grown to be the most widely used microblogging platform. Among the ways in which users found how to incorporate the tool for professional applications was the formation of Tweet Chats. These real-time events moderated and focused around a specific topic and offer opportunities to bring individuals with similar interests together for collaboration and discussion. Tweet Chats are typically scheduled for a set day and time on a weekly basis. Each uses a designated and unique hashtag (#) to identify tweets, or posts by twitter users, related to the subject group. Among the more popular healthcare focused ones are: Healthcare Communications and Social Media (#hcsms), Medical Education (#meded), and Bioethics (#bioethx). New online communities are formed frequently, and to help connect twitter users with these communities, the Healthcare Hashtag Project [8] was created. These online twitter communities offer opportunities for collaboration and access to resources not easily found through traditional means of research. Among the benefits is accepted overlap across subject areas to help bridge different communities. In September of 2014, the Twitter account @BioethxChat hosted a tweet chat focused on ethical issues in orthopedics [9] that was co-moderated by an orthopedic surgical resident and bioethicists. It included discussion topics on orthopedic procedural cost fluctuations dependent on geographic location but for the same procedure, the use of embryonic stem cells in treatment, and conflicts of interest for orthopedic surgeons with financial investments in implant devices used with their patients.

Shared online sources of knowledge, such as Wikipedia, offer free encyclopedic information written and reviewed by its users. A review of user-generated content related to the field of orthopedic surgery (e.g., osteosarcoma) found some areas to be reasonably accurate [10]. The success of Wikipedia has prompted an interest in developing more specialized and clinically critiqued crowd sourced repositories that can be utilized by experts in specific fields. One example being Orthomind.com, which is self-described as a “customized knowledge distribution platform, where orthopedic surgeons can privately collaborate and rapidly share information” [11]. Membership is limited to orthopedic physicians who have been vetted by the operators of the website.

Physician bloggers writing about patient education and public health issues offer a valuable service; in that, they help improve the quality of information available online, much of which is sometimes not backed by science or thinly veiled

marketing materials. A Pew Institute survey found that 75 % of people searching for health-related topics do not verify the authenticity of their source information [3••]. The volume of inaccurate or biased information online poses harm to patients that healthcare providers cannot ignore. Physicians have the expertise and training to ascertain the reliability of posted health information and direct their patients to trusted sources when seeking information online.

Social media offers not only a wide array of tools for healthcare professionals, but creates a space for ingenuity and creativity for physicians to come together virtually. These opportunities support professional development, patient education and outreach, and are conducive to exploring complex ethical and professionalism issues with one another and other health professionals.

Ethical concerns

Most often, the concerns of social media used by healthcare providers involve patient privacy issues. Under the Health Insurance Portability and Accountability Act (HIPAA), healthcare providers are designated as “covered entities,” meaning, they have a legal obligation to safeguard protected patient information from disclosure to third parties without authorization [12]. Use of social media is not prohibited or discouraged by HIPAA, but there have been many examples of patient information being shared by providers. Lack of awareness and foresight by providers using social media led to such privacy violations. Greater attention to ensuring confidentiality has been made by healthcare institutions, as they have begun to update their own policies regarding patient information to include social media usage. Healthcare providers are obligated to be familiar with their own institutional policies regarding social media usage, and in the absence of any such policy, seek guidance and clarification from institutional leadership. When faced with inadequate policies, physicians should help to develop approaches that are pragmatic, ethically responsible, and in the best interests of the patients and community being served.

Physicians using social media to communicate with others should be mindful of the different types of online interactions they may engage in and the varying contextual features of those relationships. Peer to peer relationships between colleagues should avoid any references or disclosures of patient information, even when seeking collaboration on treatment approaches or techniques. If the discussion requires the sharing of such identifiable information about a patient, the conversation should be taken offline. Physicians engaging with either their own patients or the members of the public should limit discussions to information supported by research and considered to be within the standard of care. Adding disclaimers to social media profiles that comments offered are

not medical advice and encouraging patients to meet with their own provider or schedule an appointment with a specialist if needed should be disclosed. Online interactions are not within the patient-physician relationship, and while physicians may understand that implicitly, those on the receiving end may not see the distinction as clearly. Offline and online, there remains a power differential between patients and physicians. Physicians are ethically bound to promote the principle of beneficence and prevent harm (non-maleficence). Physicians using social media must acknowledge that this imbalance exists online and limit their influence to patient education, and when appropriate, public health promotion supported by best practices. Given that imbalance, it is generally considered not advisable to engage in social relationships online with patients. An acceptable exception would be social media accounts that are intended for professional purposes only. The importance of a distinction between professional relationships and personal relationships is not unique to social media, but something all physicians need to be mindful of when interacting with patients.

According to a Pew research study, as many as 73 % of adults in the United States are using one or more types of social media [13]. We accept that patients, as healthcare consumers, will look for information online about their physicians or when seeking a new physician or specialist. The question of whether physicians should ever search online for information about their patients raises ethical concerns about patient privacy and potential harm to the patient-physician relationship. Whether “googling patients” for diagnostic or treatment concerns or whether for indulging personal curiosity, the ability to do so, is more common than patients realize [14, 15•]. Should a physician find information about a patient online that may be detrimental to the patient’s health and well-being; is the physician then obligated to discuss this with the patient? How might a patient react knowing that his personal activities may be monitored or could be taken out of context by his/her healthcare provider? While there are no prohibitions against such actions by physicians, there is debate among health professionals as to the appropriateness of “googling patients” without their knowledge. One approach to consider when faced with an ethical dilemma such as this can be drawn from the Principle of Double Effect [16•], which is based in Christian philosophical teaching. It offers guidance for analyzing complex moral issues that may bring forth consequences, which could be either good or bad. An act, in this case, looking for information online about a patient, may be considered ethically permissible if the intention of the physician is to only promote the patient’s well-being. Even if the consequences of such an act are bad, as with a patient who feels his/her privacy has been violated, the ethical justification for the act does not change. While this approach addresses the “ethicality” of searching for information online about patients, it does not address the complexities of how to engage with

patients face to face about such issues when they arise. It would be wise for a physician to consider how such a conversation would take place with a patient before considering this course of action. If unwilling to have that discussion, then such activities by physicians should be avoided.

Physicians considering the use of social media to write about patient care via blogs or participating in public forums, should always be mindful of the privacy issues discussed previously. There is some disagreement as to whether writing about patients who have been de-identified is ethically acceptable. A rich tradition of medical narrative writing has been embraced as a means of promoting professionalism among physicians and physicians in training. Social media platforms lend themselves to such creative outlets. While steps can be taken to ensure compliance with HIPAA guidelines to protect patient health information, this does not address and may not satisfy honoring the principle of respect for personhood when writing about patients and the care provided to them. Physicians wishing to share their patients' stories for the benefit of others should seek permission from those patients and further should disclose this in their writing.

Professional identity versus personal identity

In response to its growth and the impact of social media on the practice of medicine, healthcare institutions, state medical boards, and physician accreditation organizations have developed recommendations and policies regarding the use of social media. There is general consensus among these governing bodies as to the best practices of social media use among physicians. One of the advised recommendations put forth or supported by the American Medical Association (AMA), American College of Physicians (ACP), Federation of State Medical Boards (FSMB), American Academy of Orthopaedic Surgeons/American Association of Orthopaedic Surgeons (AAOS) is the creation of separate professional and personal social media accounts [3•, 17•, 18•].

These are not requirements, but as stated, recommendations offered for physicians to consider when choosing how they wish to utilize social media. It is important to note that there is some debate as to whether such recommendations are pragmatic in their approach. In examining the issue of physician identity, DeCamp and colleagues view such policies as operationally impossible. Further, they lack in agreement among active physician social media users, are inconsistent with the concept of maintaining a professional identity, and are potentially harmful [19•]. While distinct online identities may presume to avoid ethical dilemmas or concerns, it is not a guarantee against such possibilities. Having multiple accounts does not prevent patients or colleagues from discovering the linkage. If others deem content expressed on a personal account to be offensive, a designation of it being for “personal

use” versus “professional use” is meaningless. Having dual identities online may be seen as lacking in transparency, if the presence and rationale for multiple accounts is not apparent to others with whom physicians engage with online. It is advisable to reflect on any social media usage as content you will accept to be publically associated with you and a reflection on your professionalism. If such content's association gives you concern, it is best to reconsider whether it should be shared at all. Therefore, separating professional and personal identities is inconsistent with the general concept of professional identity [20].

Conclusion

The rise of the digital era through the creation of the Internet and proliferation of social media has fundamentally changed the way in which we communicate with one another. It is also transforming the way in which we provide and receive healthcare. As its utilization among physicians grows, so must awareness of the implications it has on our ethics, professionalism, relationships, and profession [21•]. At its heart, social media is about communication and the relationships among users. Physicians, who choose to ignore or dismiss the relevance of social media to their practice of medicine, may find their own relevance as thought leaders in their respective fields to be diminished in the coming years.

Compliance with Ethics Guidelines

Conflict of Interest Patrick D. Herron declares that he has no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

References

Papers of particular interest, published recently, have been highlighted as:

- Of importance
- Of major importance

1. Sweetser KD, Lariscy RW. Candidates make good friends: an analysis of candidates' uses of Facebook. *Int J Strategic Commun.* 2008;2:175–98.
2. Indes J, Gates L, Mitchell E, Muhs B. Social media in vascular surgery. *J Vasc Surg.* 2013;57(4):1159–62. *Discusses the use and application of social media to expand the visibility of the medical specialty, vascular surgery. Provides comparable approaches for those specializing in musculoskeletal medicine.*
3. American Academy of Orthopaedic Surgeons & American Association of Orthopaedic Surgeons (AAOS). *Social Media in*

- Healthcare: A Primer for Orthopaedic Surgeons. Rosemont, Illinois: AAOS; 2012. *Serves as a good resource reference for all those practicing or considering a career in Orthopedic Surgery.*
4. Christensen C. “Disruptive Technologies Catching the Wave”. Harvard Business Review:P3. 1995.
 5. Curry E, Li X, Nguyen J, Matzkin E. Prevalence of Internet and social media usage in orthopedic surgery. Orthopedic Rev. 2014;6(3). *This article offers compelling research data for those practicing Orthopaedic medicine on patient perspectives and interests in social media. It serves as a useful reference for those interested in developing their social media brand professionally.*
 6. Luks, HJ. Is LinkedIn Right for Doctors? October 31, 2013. Accessed on November 5, 2014. Available at: <http://www.howardluksmd.com/orthopedic-social-media/linkedin-for-doctors/>. *A leading expert in social media usage among physicians, Dr. Luks, serves as a good role model for fellow Orthopedists interested in utilizing social media as health care professionals.*
 7. VuMedi.com. Accessed on December 5, 2014. Available at: <https://www.vumedi.com/pages/about/>
 8. Why the Healthcare Hashtag Project? Accessed on November 21, 2014. Available at: <http://www.symplur.com/healthcare-hashtags/>
 9. Bioethx Transcript for September 29, 2014. Accessed on November 5, 2014. Available at: <http://embed.symplur.com/twitter/transcript?hashtag=bioethx&fdate=09%2F29%2F2014&shour=17&smin=30&tdate=09%2F29%2F2014&thour=18&tmin=45>
 10. Leithner A, Maurer-Ertl W, Glehr M, Friesenbichler J, Leithner K, Windhager R. Wikipedia and osteosarcoma: a trustworthy patients’ information? J Am Med Inform Assoc. 2010;17(4):373–4.
 11. Orothomind.com. Accessed on December 5, 2014. Available at: <http://www.orthomind.com/AboutUs>
 12. Health Insurance Portability and Accountability Act of 1996. 42 U.S.C. 1320D-9. 2012.
 13. Maeve Duggan and Aaron Smith, Pew Research Center, January 2014, “Social Media Update 2013” Available at: <http://pewinternet.org/Reports/2013/Social-Media-Update.aspx>
 14. Warraich H. When Doctors ‘Google’ Their Patients. The New York Times [Internet]. 2014 [cited 5 November 2014]. Available at: http://well.blogs.nytimes.com/2014/01/06/when-doctors-google-their-patients-2/?_r=0
 15. Baker M, George D, Kauffman G. Navigating the Google Blind Spot: An Emerging Need for Professional Guidelines to Address Patient-Targeted Googling. J Gen Intern Med. 2014. *A good analysis of the professional and ethical concerns raised by the utilization of social media by health care professionals and in particular with searching online for information about patients.*
 16. Stevenson S, Peck L. “I am eating a sandwich now”: intent and foresight in the Twitter Age. J Mass Media Eth. 2011;26(1):56–65. *This offers an insightful discussion on the bioethical principle of Double Effect and its application to issues of professionalism with social media.*
 17. Farnan J. Online medical professionalism: patient and public relationships: policy statement from the American College of Physicians and the Federation of State Medical Boards. Ann Intern Med. 2013;158(8):620. *Provides analysis and guidelines for practitioners on the influence of social media on the doctor-patient relationship and the public’s view of physician behavior online.*
 18. American Medical Association. Professionalism in the Use of Social Media, June 2011. Accessed on November 5, 2014. Available at: <http://www.ama-assn.org/ama/pub/physician-resources/medical-ethics/code-medical-ethics/opinion9124.page?>. *Serves as a good resource reference for all those practicing or considering a career in Medicine.*
 19. DeCamp M, Koenig T, Chisolm M. Social media and physicians’ online identity crisis. JAMA. 2013;310(6):581. *Discusses concept of professional identity and identity formation in the age of social media and changing views of medical professionalism. Includes relevant analysis of issues concerning the protection and promotion of one’s professional identity online.*
 20. Costello CY. Professional Identity Crisis: Race, Class, Gender, and Success at Professional Schools. Nashville, TN: Vanderbilt University Press; 2005
 21. Chretien K, Kind T. Social media and clinical care: ethical, professional, and social implications. Circulation. 2013;127(13):1413–21. *Covers major topics of professional and ethical dilemmas encountered by health care professionals engaging with one another and with the public via social media.*