Social Media and Health Care Professionals: Benefits, Risks, and Best Practices

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INTRODUCTION

Many social media tools are available for health care professionals (HCPs), including social networking platforms, blogs, microblogs, wikis, media-sharing sites, and virtual reality and gaming environments.[1–8] These tools can be used to improve or enhance professional networking and education, organizational promotion, patient care, patient education, and public health programs.[3,5–10] However, they also present potential risks to patients and HCPs regarding the distribution of poor-quality information, damage to professional image, breaches of patient privacy, violation of personal–professional boundaries, and licensing or legal issues.[2–4,8,10–17] Many health care institutions and professional organizations have issued guidelines to prevent these risks.[3,4,7,10,17,18]

WHAT ARE SOCIAL MEDIA?

The definition of "social media" is broad and constantly evolving. The term generally refers to Internet-based tools that allow individuals and communities to gather and communicate; to share information, ideas, personal messages, images, and other content; and, in some cases, to collaborate with other users in real time.[2–6] Social media are also referred to as "Web 2.0" or "social networking."[5]

Social media sites provide a variety of features that serve different purposes for the individual user.[19] They may include blogs, social networks, video- and photo-sharing sites, wikis, or a myriad of other media, which can be grouped by purpose, serving functions such as:[4,7,8]

- Social networking (Facebook, MySpace, Google Plus, Twitter)
- Professional networking (LinkedIn)
- Media sharing (YouTube, Flickr)
- Content production (blogs [Tumblr, Blogger] and microblogs [Twitter])
- Knowledge/information aggregation (Wikipedia)
- Virtual reality and gaming environments (Second Life)

Participation in social media by the general public has increased sharply over the past nine years.[5,11] In the U.S., the proportion of adults using social media has increased from 8% to 72% since 2005.[5,11] The use of social media is prevalent across all ages and professions and is pervasive around the world.[2,8] In 2012, Facebook users exceeded one billion people worldwide, a number that represents one-seventh of the world's population.[2,8] In addition, each day 100 million active Twitter users send more than 65 million tweets, and two billion videos are viewed on YouTube.[2] Social media have been linked to highly significant political events, such as the Arab Spring revolution, as well as to widespread societal trends, including the shortening of individuals' attention spans and the decline of print news media.[5]

PARTICIPATION IN SOCIAL MEDIA BY HEALTH CARE PROFESSIONALS

Social media provide HCPs with tools to share information, to debate health care policy and practice issues, to promote health behaviors, to engage with the public, and to educate and interact with patients, caregivers, students, and colleagues.[6,11,14,16] HCPs can use social media to potentially improve health outcomes, develop a professional network, increase personal awareness of news and discoveries, motivate patients, and provide health information to the community.[8,11]

Physicians most often join online communities where they can read news articles, listen to experts, research medical developments, consult colleagues regarding patient issues, and network.[9] There they can share cases and ideas, discuss practice management challenges, make referrals, disseminate their research, market their practices, or engage in health advocacy.[14,15] A growing minority of physicians also uses social media to communicate directly with patients to augment clinical care.[9,15]

A survey of more than 4,000 physicians conducted by the social media site QuantiaMD found that more than 90% of physicians use some form of social media for personal activities, whereas only 65% use these sites for professional reasons.[9,14] Nearly a third of physicians have reported participating in social networks.[8] However, both personal and professional use of social media by physicians is increasing.[3,9,15]

Unlike physicians, pharmacists have been relatively slow to adopt social media.[1] Much of the growth in the professional use of social media among this group appears to involve pharmacist-specific social networks.[1] Surveys have shown that many pharmacists use Facebook.[1] Although this use is most often for personal communications, more than 90 pages on Facebook are related to the pharmacy profession, such as the Pharmacists Interest Page, the American Pharmacists Association, and the Cynical Pharmacist.[1] Only 10% of pharmacists use Twitter, and a search for "pharmacist" on LinkedIn identified 274,981 profiles.[1]

SOCIAL MEDIA SITES FOR HEALTH CARE PROFESSIONALS
Social Networking Sites

As social networking has evolved, medically focused professional communities have been established.[14] These networks are often private and protected from nonmembers, such as the lay public and even members of other health professions.[1] Funding sources for these sites vary, with financial support

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Social Media and Health Care Professionals: Benefits, Risks, and Best Practices

often being provided by professional associations, advertising or data sales, research funding, and pharmaceutical companies.[17]

Sermo is a "physician-only" social networking community that verifies the credentials of new members during registration.[15] Physicians representing 68 specialties in all 50 states gather on this site to network, to discuss treatment options, and to query peers for expert advice.[15] As of April 2014, Sermo boasted a U.S. membership of 260,000 physicians, most of whom use pseudonyms for anonymity. Sermo consists primarily of a large message board on which physicians create topics for discussion.[14] It also provides a rating system by which doctors rank posts on the site on the basis of perceived credibility.[15]

Doximity is a newer "physician-only" social networking community that offers text and images that are compliant with the Health Insurance Portability and Accountability Act (HIPAA), which allows point-of-care information crowdsourcing.[15] As of 2013, more than 100,000 physicians and students were members. Doximity uses a national database to create "placeholder" accounts with demographic and contact information for all U.S. physicians. Therefore, although only 12% of U.S. physicians are active members of Doximity, nearly 100% can be messaged through the network.[14]

The Medical Directors Forum (www.medicaldirectorsforum. skipta.com) is a social networking site for medical directors that provides a verified, secure, closed-loop environment for peer-to-peer interaction. The resources on this site include a comprehensive library, discussion groups, calendar postings, and alerts. The site also provides dedicated group pages for medical directors working in a wide range of sectors, including: hospital, veterans affairs, Medicare, group practice, employer, behavioral health, managed care, correctional facility, and long-term care.[20]

Other physician networking sites include QuantiaMD (www. quantiamd.com), Doctors' Hangout (www.doctorshangout. com), and Doc2Doc (doc2doc.bmj.com).[17] Many of these sites require doctors to submit their credentials to a site gatekeeper, recreating the intimacy of a "physicians' lounge" in an online environment.[17]

The nonprofit Student Doctor Network is a popular social community site for undergraduate and practicing physicians, dentists, and veterinarians in the U.S. and Canada.[5] It claims more than 40,000 active members and 1.5 million unique monthly visitors.[5] The forums on Student Doctor Network focus on clinical career topics, do not support detailed user profiles or "friending," and encourage anonymity.[5]

Social networking sites are also available for pharmacists. These sites include ASHP Connect (www.connect. ashp.org), which is sponsored by the American Society of Health-System Pharmacists; PharmQD (www.pharmqd. com); and The Pharmacist Society (www.pharmacistsociety. com).[1,6] Professional networking forums for nurses include the American Nurses Association's ANANurseSpace (www. ananursespace.org), NursingLink (www.nursinglink.com), and SocialRN (www.twitter.com/socialRN).[17]

In addition, HCPs can easily connect with each other via "general purpose" online social networks, such as Facebook, Twitter, and LinkedIn.[8] Facebook is the most popular social media site in the U.S., while LinkedIn is the most popular professional networking site.[1,11,17]

Glossary[7,17]

- **App**—A software program that performs a specific function that is used on a computer or mobile device.
- **Avatar**—A graphic or illustration that represents a particular person in a computer game or on an Internet site.
- **Blog**—An interactive website, or part of a website, maintained by an individual, a group of individuals, or an organization that posts regular entries of commentaries and events.
- **Crowdsource**—Harnessing the knowledge base and skills of an external community for the purpose of collaboratively solving problems, sharing knowledge, or gathering opinions.
- **Direct message**—Private messages between Twitter users.
- **Handle**—The unique user name selected by a Twitter user. It is designated by an "@username" identifier.
- **Hashtag**—The # symbol used in front of key words to index and make the topic of a tweet searchable.
- **List**—Publicly or individually curated groups of Twitter users.
- **Microblog**—A Web service that allows subscribers to send short messages to other subscribers.
- **Podcast**—Audio or audiovisual content that can be downloaded to a computer or mobile device for later playback.
- **Re-tweet**—The redistribution of a tweet from another user on Twitter to a user's personal network.
- **Tags**—Names or key words added to blog posts or photos.
- **Timeline**—A real-time list of posts on Facebook.
- **Tweet**—A Twitter message, which by definition must be no more than 140 characters.
- **Wiki**—A collaborative website that can be directly edited by anyone with access to the site.

Blogs

The "blog," a term formed by truncating "Web log," is the oldest and most established form of social media, which has been used in medicine since as early as 2004.[17] Blogs can reach wide audiences, especially if one writes content that is of significant interest.[14] Posts that garner enough interest can be shared and viewed again and again by readers (referred to as "going viral").[14] Content that goes viral can establish a reputation or an online presence.[14]

Blogs can also provide the opportunity to publish large amounts of information in a variety of media (text, video, and audio) in an open forum.[14] Most blogging platforms allow readers to respond to published content by posting their own comments.[14] This enables an ongoing dialogue between the blogger and his or her audience.[14] Examples of widely used free "long-form" blogging platforms include Tumblr (www.tumblr.com), WordPress (www.wordpress.org), and Blogger (www.blogger.com).[14]

Some physicians use blogs to communicate with other HCPs or the public.[14] For example, the Clinical Cases blog (www.clinicalcases.org) features case studies in a wide range of medical

Social Media and Health Care Professionals: Benefits, Risks, and Best Practices

specialties.[17] This blog also includes a special section on admission note templates, procedure guides, and related material.[17] Blogs are becoming more popular among pharmacists, but approximately two-thirds of these blogs are written anonymously.[1]

Microblogs

Microblogs provide the most dynamic and concise form of information exchange via social media.[17] This format allows users to post a large number of brief messages or updates over a short period.[17] Numerous microblogging platforms exist; however, Twitter is the most prominent.[17] On Twitter, users publish messages (called "tweets") that consist of a maximum of 140 characters.[17] Tweets can be supplemented with hyperlinks to other online media, such as videos or websites.[17] Tweets can also include "hashtags," a form of information indexing that allows people to search for tweets that are related to a particular discussion or topic.[17] Hashtags followed by HCPs include #HCSM (for Health Care Social Media), #MDChat, and #Health20.[17]

There are more than 140 reported uses for Twitter in health care.[17] The Penn State College of Medicine has used Twitter to facilitate discussions between students and instructors, to conduct course evaluations, to solicit class responses, and to monitor students' progress.[17] A Twitter Journal Club also provides advance posts about papers and questions to be discussed, along with a hashtag, so that students, doctors, and anyone interested in the subject can interact.[17] Twitter has also been used at medical conferences to discuss and enhance speaker presentations by posting real-time comments from the audience.[17] Some physicians have used Twitter to develop a large following, enabling them to reach a broad audience and potentially even affect health policy decisions.[14]

Wikis

Wikis are public forum websites featuring text and multimedia content that can be edited by users.[17] "Wiki" is a Hawaiian word meaning "quick," which refers to the speed with which information on a wiki can be accessed, added, edited, or deleted.[17]

Surprisingly, Wikipedia is the most commonly used wiki in the medical community.[17] It is often used as a reference by clinicians, despite its known shortcomings, such as errors and narrow breadth of information.[5] One study found that 35% of 1,056 pharmacists used Wikipedia, although only 19% trusted it.[5] In another survey of more than 1,000 pharmacists, one in five respondents said they trusted Wikipedia, but only one in four knew that anyone could edit the site.[1] One reason for the popularity of Wikipedia is its prominence in Google searches.[5] A study found that 70% of 35 junior physicians used Wikipedia to find medical information during a week-long period, with 93% citing ease of use as their primary motivation.[5]

As the accuracy and completeness of Wikipedia are often debated, the drug information on that site was compared with a validated and trusted information source, the Medscape Drug Reference.[17] This analysis found that Wikipedia included approximately 76% of the content found in Medscape and had very few factual errors (most were errors of omission).[17] In contrast, other studies have found that Wikipedia includes factual errors and has a lack of depth compared to traditionally edited, peer-reviewed, evidence-based information sources.[1,21]

Other wiki projects emulate Wikipedia in that they crowd-source medical content. However, to maintain editorial credibility, they also verify the credentials of contributors.[5] RxWiki (www.rxwiki.com) allows only pharmacists to add or edit drug information.[1] This was also the model for Medpedia (an initiative from Harvard University, Stanford University, the University of Michigan, and the University of California at Berkeley), which verified authors' credentials before allowing them to generate content.[17] However, when most articles posted on "author verified" wikis were compared with open initiatives, such as Wikipedia, they were found to be shorter, to be of equal or lesser quality, and to include fewer references.[17] Wikipedia was also found to promote quality and accuracy more actively over a period of 90 days because of crowdsourcing, compared with Medpedia, which had a comparatively restrictive editorial process.[17]

Media-Sharing Sites

Media-sharing sites, such as YouTube, offer a large selection of social media tools that are optimized for viewing, sharing, and embedding digital media content on the Web.[17] They also provide features that are typically found on other types of social media sites, such as profiles, connections, comments, and private messaging.[17] Most media-sharing sites are easy to use, provide free basic accounts, and are accessible from both desktop and mobile devices.[17]

In medicine, media-sharing sites can be important resources for education, community building, marketing, and branding.[17] Among the most notable media-sharing sites for HCPs is The Doctors' Channel (www.thedoctorschannel.com), which hosts videos featuring medical news, continuing medical education, and health care-related entertainment.[17]

Virtual Reality and Gaming Environments

Multi-User Virtual Environments (MUVEs) are three-dimensional environments that allow users to interact with each other through a virtual representation of themselves (known as an avatar).[17] The application of MUVEs in health care is growing rapidly. They are increasingly being used for patient education, for the simulation of epidemiology and mass prophylaxis, for psychotherapy, for surgery, and for research.[17] However, the fact that MUVEs are often perceived as computer games rather than as serious clinical tools may impede their adoption by health care institutions.[17]

MUVEs can be classified as general-purpose or health care–specific.[17] The most well-known general-purpose MUVE is Second Life. This general-purpose environment, however, is often used for health care education.[17] One study found 68 health-related virtual locations on Second Life.[17] These included the Centers for Disease Control and Prevention (CDC) education center, which aims to influence the real-life decision-making abilities of visitors.[17] Health care–specific MUVEs are typically used for one purpose, such as medical education (e.g., CliniSpace [www.clinispace.com]), surgical simulation (e.g., OpenSim [www.opensimulator.org]), or psychiatric treatment (e.g., InWorld Solutions [www.inworldsolutions.net]).[17]

USES FOR SOCIAL MEDIA IN HEALTH CARE
Professional Networking

The most popular social media sites for physicians are those where they can participate in online communities, listen to

Social Media and Health Care Professionals: Benefits, Risks, and Best Practices

experts, and network and communicate with colleagues regarding patient issues.[9] The use of social media by pharmacists also frequently focuses on communication with colleagues.[1] The social-networking platforms used for professional networking are often solely accessible and specifically cater to people within these professions.[12] Besides clinical topics, discussions on these sites address diverse subjects, such as ethics, politics, biostatistics, practice management, career strategies, and even dating in a medical environment.[17] They can also provide a supportive environment for HCPs who subspecialize.[8]

Another example of professional networking among HCPs is crowdsourcing, which involves harnessing the knowledge and skills of a community to solve problems or to gather information and opinions.[7,15] Social media can also be used to connect HCPs in third-world countries with specialists in more medically advanced locations.[12] For example, surgical procedures can be streamed via the Internet and questions can be asked via Twitter in real time.[12] Thus, social media provide a new communication channel for HCPs to network professionally to share and exchange medical information in ways and at a pace that was never before possible.[7]

Professional Education

The communication capabilities provided by social media are also being used to improve clinical education.[5] The high usage rate of social media by 18- to 29-year-olds has motivated the adaptation of clinical curricula to reflect the changing habits and culture of incoming students.[1,5] Many studies have described the use of social media tools to enhance clinical students' understanding of communication, professionalism, and ethics.[2] Universities are also using social media to recruit students, to increase access to academic libraries, and to create virtual classrooms and office hours, as well as other unique learning experiences.[2]

Social media are also being widely implemented in undergraduate pharmacy curricula.[1] One-third of pharmacy programs have reported using Twitter in some capacity.[1] A 2011 survey also found that 38% of pharmacy faculty members use Facebook for teaching, with half reporting that they plan to use social media in the future.[1] In one example, an instructor in a geriatric pharmacotherapy course at the University of Rhode Island used Facebook to encourage class discussions and to connect students with senior citizens who had volunteered to participate in the course.[1] This experience improved student perceptions of older adults and also introduced the senior citizens to Facebook.[1] At Auburn University, instructors established Twitter handles so that pharmacy students could participate in class discussions anonymously.[1] By semester's end, 81% of students felt Twitter had let them express opinions they wouldn't have shared otherwise, although 71% thought that Twitter had been distracting.[1]

Online social media platforms have also influenced the educational experience for nurses, with one survey reporting that 53% of nursing schools are now using these tools.[2] For example, Twitter has been used to enhance the clinical decision-making skills of nursing students in critical care situations.[2] The students viewed videos of clinical scenarios and tweeted their observations on the patient's condition for instructor feedback.[2] Other uses of Twitter in nursing education include posting a live stream of student insights during

class, or creating a class hashtag so that resources such as videos, websites, articles, and photographs could be shared.[2] Media sharing sites such as YouTube can also be used in the classroom to stimulate discussion, to illustrate a point, or to reinforce a concept.[2] Students can view a video and then respond to questions that promote clinical reasoning.[2]

The incorporation of social media into clinical education has met with mixed reviews, however.[5] Courses that incorporate such tools have generally been positively received, but in some cases, students have reported feeling that the use of Facebook for teaching purposes is an intrusion into their social lives.[5] Balancing the enhanced communication opportunities provided by social media with the downside of increased distraction in an educational environment is also a challenge.[5] Unfortunately, standards guiding the appropriate use of social media tools in education are in their infancy.[2]

Organizational Promotion

Health care organizations, including hospitals, health systems, professional societies, pharmaceutical companies, patient advocacy groups, and pharmacy benefit companies, are using social media for many purposes.[6,7] Uses include communicating with the community and patients; enhancing organizational visibility; marketing products and services; establishing a venue for acquiring news about activities, promotions, and fund-raising; providing a channel for patient resources and education; and providing customer service and support.[4,8,9,14] It has been estimated that 70% of U.S. health care organizations use social media, with Facebook, Twitter, and YouTube being the most popular.[2,9] Blogs are also used by many medical centers and hospitals.[17]

Studies have shown that this use of social media can greatly enhance the image and visibility of a medical center or hospital. In one study, 57% of consumers said that a hospital's social media presence would strongly influence their choice regarding where to go for services.[2] A strong social media presence was also interpreted by 81% of consumers as being an indication that a hospital offers cutting-edge technologies.[2] In another study, 12.5% of surveyed health care organizations reported having successfully attracted new patients through the use of social media.[9]

The rate of social media adoption by nonprofit health care organizations is also increasing.[9] The Mayo Clinic became an international leader in such efforts when it established the Social Media Health Network (http://socialmedia.mayoclinic.org) in 2010. In its mission statement for the network, the clinic said it sought to provide an "authentic voice for patients and health care professionals, building relationships through the revolutionary power of social media."[9] To that end, this initiative has created a presence on Facebook, YouTube, and Twitter.[8,9] It also provides a vast library of blog posts, podcasts, conferences, and webinars to engage various community stakeholders.[8,9] The Mayo Clinic and other educational health care institutions have also used blogs to foster peer-to-peer learning and to implement new protocols.[17] Many universities also have a branded YouTube channel, where videos can be shared through the university's social media site.[2]

Social media also allow pharmacies to communicate with large groups of customers simultaneously, to conduct surveys,

and to enable patients to feel that they are part of a pharmacy community.[18] Many pharmacies use social media to reach out to followers about products, services, discounts, newsworthy events, and health information.[18] Several large pharmacies and insurers have piloted programs that provide prescription refill and appointment reminders via social-media text messaging.[10]

Patient Care

Although there has been a reluctance among HCPs to use social media for direct patient care, this practice is slowly being accepted by clinicians and health care facilities.[3,7] For example, Georgia Health Sciences University has provided patients with access to a platform called WebView, which allows the patients to reach their doctors to ask questions or to request prescription refills.[3]

Recent studies have found that physicians have begun to develop an interest in interacting with patients online.[9] Some physicians are using social media, including Twitter and Facebook, to enhance communication with patients.[3] Approximately 60% of physicians were found to favor interacting with patients through social media for the purpose of providing patient education and health monitoring, and for encouraging behavioral changes and drug adherence, with the hope that these efforts will lead to "better education, increased compliance, and better outcomes."[9] However, other studies have shown that considerable resistance still exists to using social media to interact with patients.[7] In a survey of approximately 480 practicing and student physicians, 68% felt it was ethically problematic to interact with patients on social networks for either personal or professional reasons.[7]

Evidence indicates that electronic communication with patients can improve their care and health outcomes.[9,10] Studies have shown that supplemental electronic communication emphasizes physicians' advice and improves adherence for patients with chronic diseases.[10] It may also improve patient satisfaction by increasing the time spent communicating with and having questions answered by their physicians.[10] A survey of patients at an outpatient family practice clinic found that 56% wanted their HCPs to use social media for reminders, for scheduling appointments, for diagnostic test results, for prescription notifications, and for answering general questions.[15] Patients who did not use social media said they would start if they knew they could connect with their health care provider.[15]

Patient Education

Social media can also improve patients' access to health care information and other educational resources.[12] In the U.S., eight in 10 Internet users search for health information online, and 74% of these people use social media.[5,19] Through social media, patients can join virtual communities, participate in research, receive financial or moral support, set goals, and track personal progress.[4,19]

Physicians are also using social media to promote patient health care education.[7] They tweet, make blog posts, record videos, and participate in disease-specific discussion forums focused on patient education.[7,15] Such forums provide an important opportunity for physicians to distribute evidence-based information to counter inaccurate material on the Internet.[7] In some social media forums, the public is provided

with an opportunity to participate in these discussions.[7]

Unlike other health advice that a patient might encounter online, physicians could use social media to develop messaging that may be more likely to resonate with and be acted on by patients.[8] Some physicians believe that social media would be particularly beneficial for patients with chronic, rare, or fatal diseases; with questions about maternal or infant care; or with personal health-related goals, such as weight management.[9] The distribution of credible information has been proved to motivate observable behavioral changes within social networks.[8] Research has begun to show that interventions based on social media can positively affect weight loss, tobacco cessation, risky sexual behaviors, and physical activity.[8,9]

Patients are also using social media to connect with others affected by similar conditions.[9] For example, the social networking site PatientsLikeMe (www.patientslikeme.com) provides a venue for patients to access information, suggestions, and support from other people who have the same disease or condition.[12] Facebook groups also frequently focus on specific medical conditions.[19] These groups actively engage in peer-to-peer support as well as fund-raising efforts for affiliated organizations and individuals.[17]

Public Health Programs

Social media have created vast global networks that can quickly spread information and mobilize large numbers of people to facilitate greater progress toward public health goals.[8] Social media can therefore be a powerful tool for public education and advocacy regarding public health issues.[10] Some states' public health departments are using Twitter and other social media for these purposes.[9]

Other public health organizations use keyword content from Twitter and other social networks, in combination with location-tracking technologies, to respond rapidly to disasters and to monitor the health and welfare of populations.[8] The CDC maintains an active presence on Twitter and Facebook to track "tweets" that might indicate a flu outbreak and to share updates about such incidents.[8] The CDC has also used social media to locate and monitor sources and suspected cases of Legionnaire's disease.[9]

Organizations such as the Red Cross track Twitter posts during natural disasters, such as hurricanes and earthquakes, to gather information about where the greatest needs are.[8,14] Citizen-report blogs have also been monitored by hospitals for information about potential mass casualty events.[17] When used in this way, real-time social media sites provide greater agility and enhanced preparedness for responses to disasters and public health emergencies.[8] Social media sites also provide disaster and emergency response personnel with a means to rapidly share and access important information provided by agencies such as the CDC and the U.S. Preventive Services Task Force.[3]

The widespread use of social media can also influence public health behaviors and goals through social reinforcement.[8] Because human beings are a highly social species, they are often influenced by their friends, as well as by friends of friends.[8] One example of the powerful effect of social media was seen after Facebook decided to allow users to post their organ-donor status in their profile.[8] According to Donate Life America, the

week after this feature was introduced, online state organ-donor registries experienced a 23-fold surge in donor pledges that was presumably due to this social-networking effect.[8]

THE DANGERS OF SOCIAL MEDIA

Poor Quality of Information

The main limitation of health information found on social media and other online sources is a lack of quality and reliability.[16] Authors of medical information found on social media sites are often unknown or are identified by limited information.[13,16] In addition, the medical information may be unreferenced, incomplete, or informal.[13] While evidence-based medicine de-emphasizes anecdotal reports, social media tend to emphasize them, relying on individual patient stories for collective medical knowledge.[1] Similar problems exist with traditional online media; however, the interactive nature of social media magnifies these issues, since any user can upload content to a site.[16] Social media users may also be vulnerable to both hidden and overt conflicts of interest that they may be incapable of interpreting.[13]

Measures are available that may be useful in addressing this problem. HCPs can guide patients to credible peer-reviewed websites where the information is subject to quality control.[10] The World Health Organization is leading a request to the Internet Corporation for Assigned Names and Numbers to establish a new domain suffix that would be used solely for validated health information.[17] The issuance of this domain suffix would be strictly regulated, and the content of websites with these addresses would be monitored to assure compliance with strict quality criteria.[19] These domain addresses would be prioritized by search engines when providing results in response to health-related inquiries.[17]

Damage to Professional Image

A major risk associated with the use of social media is the posting of unprofessional content that can reflect unfavorably on HCPs, students, and affiliated institutions.[2] Social media convey information about a person's personality, values, and priorities, and the first impression generated by this content can be lasting.[11] Perceptions may be based on any of the information featured in a social media profile, such as photos, nicknames, posts, and comments liked or shared, as well as the friends, causes, organizations, games, and media that a person follows.[11]

Behavior that could be construed as unprofessional includes violations of patient privacy; the use of profanity or discriminatory language; images of sexual suggestiveness or intoxication; and negative comments about patients, an employer, or a school.[2] Such public missteps by HCPs have been documented, including physicians taking digital photographs during surgery, posing with weapons or alcohol, and posting "tweets" that are harmful to an individual or the profession.[10] The airing of frustrations, or "venting," regarding patients also occurs in online forums and is not recommended.[10]

Information gathered from social media can also be used to make decisions regarding admission to medical or professional programs, selection for residencies, or employment.[2] Employers and residency programs now search Facebook and other social networking sites before hiring applicants.[3]

A Microsoft survey found that 79% of employers view online information regarding prospective employees, and only 7% of job candidates were aware of this possibility.[2,12] By making public posts, a person has willingly made information available for anyone to view for any purpose.[2] For some, it logically follows that candidates who don't use discretion in deciding what content to post online may also be incapable of exercising sound professional judgment.[2]

It is not unusual for social media users to be connected to overlapping networks of friends, family, and colleagues.[11] Some users try to keep their personal and professional images separate by creating different accounts.[2,11,18] This may be difficult to implement in practice because personal and professional contacts often overlap.[11] However, most social networking sites now provide privacy settings that allow individuals to customize both their profile content and who can view it.[11,19] Ideally, account and privacy settings should be set in a way that enables one's network to expand while limiting the exposure of information to people outside of the network.[11] Any settings made available by the social media site that allow users to label different relationships so that only appropriate information is shared with certain groups or individuals should also be used.[11] HCPs should conduct periodic searches for their own names or other identifying information to ensure that their social media presence projects a professional image.[2]

Breaches of Patient Privacy

Concerns regarding the use of social media by HCPs frequently center on the potential for negative repercussions resulting from the breach of patient confidentiality.[5] Such infractions may expose HCPs and health care entities to liability under federal HIPAA and state privacy laws.[4,15]

HIPAA, as modified by the Health Information Technology for Economic and Clinical Health (HITECH) act, governs the permitted use and disclosure of patient information by covered entities, including HCPs and hospitals.[4] The HITECH act details privacy-breach notification requirements and expands various mandates to include business associates.[4] Section 13410(d) addresses civil and criminal penalties for violations that are based on the nature of the violation, as well as resultant harm.[4] Although the use of social media isn't specifically referenced, these tools can certainly present risks under HIPAA and HITECH.[4] An HCP may breach federal HIPAA/HITECH or state privacy laws in a number of ways when posting information, comments, photos, or videos concerning a patient to a social networking site.[4] Whether communicating with or about patients on social media, breaches of patient confidentiality can result in legal action against an HCP and potentially his or her employer.[4] However, it is important to note that HIPAA does not restrict the distribution of medical information that has been "de-identified."[14]

In 2003, the Department of Health and Human Services (HHS) issued the HIPAA Privacy Rule, which provides the first federal privacy standards for the protection of patient information to be followed by "covered entities," such as HCPs, hospitals, and health plans.[15] The HIPAA Privacy Rule levies heavy fines and potential criminal charges on the unauthorized disclosure of *individually identifiable* health information by covered entities in oral, paper, or electronic form.[15] The

Social Media and Health Care Professionals: Benefits, Risks, and Best Practices

HIPAA Privacy Rule also includes a "safeguards standard" that requires covered entities to reasonably protect patients' health information from unauthorized disclosure by using physical, administrative, and technical safeguards.[15] The safeguard standards are somewhat flexible for entities of different sizes and resources.[15] For instance, communication between a patient and an HCP using unencrypted email might be permissible, as long as other reasonable safeguards are followed.[15]

To comply with the HIPAA Privacy Rule, clinical vignettes posted on social media concerning patients must have all personal identifying information and any revealing references removed.[10] This "de-identification" can be accomplished by changing or omitting key patient details (e.g., names, insurance or Social Security numbers, date of birth, and photos), by avoiding the description of rare medical problems, and by not including specific time frames or locations without the patient's consent.[10,14,15,17] However, despite these precautions, there have still been many well-publicized inadvertent breaches of the HIPAA Privacy Rule involving social media.[15] Protecting a person's identity when writing about patients is often more difficult than might be expected.[15] A study of medical blogs written by HCPs found that individual patients were described in 42% of the 271 samples studied.[15] Of these samples, 17% were found to include enough information for patients to identify themselves or their providers, and three included recognizable photographs of the patients.[15]

The patient's consent is a critical issue to consider when using social media.[4] An HCP or health care organization might determine whether patient permission is needed by considering the place of publication.[14] The use of specific HIPAA-compliant messaging systems, such as that provided within Doximity, may be theoretically safe even for patient-identifying information, assuming that the recipient has medical justification for receiving such information.[14] However, it is ultimately up to the individual HCP, the practice, or the organization to decide when they will seek patient consent before posting de-identified case details online.[14]

Violation of the Patient–HCP Boundary

HCPs who interact with their patients on social media may be violating the patient–HCP boundary even if patients initiate the online communication.[10] A recent study found that patients often extend online "friend" requests to their physicians on Facebook.[10] However, very few physicians reciprocate or respond, since it is generally thought to be ill-advised for an HCP to interact with a patient through a general social media forum such as Facebook.[4,8] In addition, organizational policy statements often discourage personal online communication between HCPs and patients.[10]

HCPs should therefore become familiar with the privacy settings and terms of agreements for the social media platforms to which they subscribe so that they can maintain strict privacy settings on their personal accounts.[10] Rather than "friending" or communicating with a patient on social media, HCPs can suggest that the patient set up a website that is specifically designed for posts regarding medical events, so that the HCP can follow the updates in a more professional manner.[2] For example, CaringBridge (www.caringbridge.org) is a nonprofit website that is designed to create a social media presence for patients on a protected, user-friendly venue.[2] Patients can use their CaringBridge profile for the purpose of interactively communicating with concerned followers during a health event.[2]

Physicians may also violate a patient's personal boundary through the inappropriate use of information found online or on social media.[10] Since social media can provide a wealth of information about a patient, it can be used in a positive way to aid clinical care.[15] This practice, known as "patient-targeted Googling," has been described in many medical settings.[10] Anecdotal reports have highlighted some benefits to this practice (for example, using information found on social media to identify an amnesic emergency patient or intervening when a patient is blogging about suicide).[10] However, the potential for the blurring of professional and personal boundaries exists, since this practice can also be spurred by inappropriate curiosity, voyeurism, and habit.[10,15]

An HCP may observe posts or photos on social media sites that depict patients participating in risk-taking or health-averse behaviors.[10] Digitally investigating the personal behaviors of patients, such as whether they have quit smoking or are maintaining a healthy diet, could threaten the trust needed for a strong patient–physician relationship.[10] Therefore, in such instances, an HCP should consider the source of this information and use clinical judgment to determine whether and how to reveal this discovery during patient management.[10]

Licensing Issues

The use of social media can also adversely affect an HCP's credentials and licensure.[4] State medical boards have the authority to discipline physicians, including imposing restrictions or suspending or revoking licenses.[3,10] These penalties can be meted out for unprofessional behavior, such as the inappropriate use of social media, sexual misconduct, breaches of patient privacy, the abuse of prescribing privileges, and the misrepresentation of credentials.[3,10]

U.S. licensing authorities have reported numerous professional violations by HCPs on social media that resulted in disciplinary action.[3] For example, an emergency medicine physician was reprimanded by the Rhode Island State Board for "unprofessional conduct" and was fined after making comments on Facebook about a patient.[3] The physician did not mention the patient's name in the post; however, sufficient information was included that allowed others within the community to identify the patient.[3,4] Misrepresentation of credentials is one of the most common online violations reported to state medical boards.[15] Physicians should be familiar with the requirements of state medical boards regarding online communications to ensure they do not commit any violations that might jeopardize their license.[10]

Nursing boards have also disciplined nurses for violations involving online disclosure of patients' personal health information and have imposed sanctions ranging from letters of concern to license suspensions.[12] The posting of unprofessional content on social media by HCP students is also fairly common.[3] One survey found that 60% of medical school deans reported incidents in which students had posted inappropriate content online, including patient information, inappropriate language, depictions of intoxication, and sexually explicit material.[3]

Social Media and Health Care Professionals: Benefits, Risks, and Best Practices

Legal Issues

The widespread use of social media has introduced new legal complexities.[2] A number of constitutional rights can be applied to the use of social media, such as freedom of speech, freedom from search and seizure, and the right to privacy; however, these rights can be successfully challenged.[2]

In 2009, a U.S. District Court upheld the expulsion of a nursing student for violating the school's honor code by making obscene remarks about the race, sex, and religion of patients under her care.[2] The court concluded that the school's honor code and confidentiality agreement signed by each nursing student governed the standards of acceptable behavior, dismissing the student's claim that her right to freedom of speech had been violated.[2] A similar ruling was made in a case in which a student posted pictures of herself as a drunken pirate on MySpace.[2]

Legal cases should never be discussed on social media because most current case law dictates that such information is "discoverable," although this may depend on the purpose for which the information is sought.[2,14] Even if it is posted anonymously, various investigative methods may potentially be used to directly link legal information to a specific person or incident.[14] The Facebook policy for the use of data informs users that "we may access, preserve, and share your information in response to a legal request" both within and outside of U.S. jurisdiction.[15] The policy also states that information may be shared for a number of reasons, including to aid investigations, to prevent fraud or illegal activity, and to protect Facebook, the user, or anyone else.[15] Information posted on social media can also be used to portray—rightly or wrongly—an image of an individual's character in lawsuits.[15]

HCPs can also expose themselves to lawsuits if they respond to a question sent via social media by providing medical advice. It has been suggested that a legally sound approach in response to requests for such advice would be to send a standard response form that: 1) informs the inquirer that the HCP does not answer online questions; 2) supplies offline contact information so that an appointment can be made, if desired; and 3) identifies a source for emergency services if the inquirer cannot wait for an appointment.[15] In circumstances where a patient–HCP relationship already exists, informed consent should be obtained prior to online discussions between the HCP and the patient regarding medical care.[15] A careful explanation regarding the risks of online communication, expected response times, and the handling of emergencies should be included.[15] The informed consent and any online interactions should be documented in the patient's chart.[15]

PROFESSIONAL GUIDELINES FOR THE USE OF SOCIAL MEDIA

Social Media Guidelines Issued by Health Care Institutions

Social media pose many risks for health care organizations that could potentially affect the safety and security of patient information, patient consent, employment practices, physician credentialing and licensure, the violation of HCP–patient boundaries, and other ethical issues.[4] Therefore, it would be beneficial for health care organizations to establish employee guidelines regarding the appropriate use of social media.[3,18] A list of points that might be addressed in organizational social

media policies is presented in Table 1. Consequences regarding policy violations should also be defined.[9]

Health care institutions should address the risks posed by the use of social media in their employee policies.[19] Policies should encompass discrimination, harassment, wrongful termination, leaking of confidential or proprietary information, damage to the organization's reputation, and productivity as well as other issues.[7,19] A health care organization may also consider establishing policies that involve disciplinary actions in response to employees' use of the Internet, cellphones, or tablets during working hours.[4] The establishment of such policies could diminish a number of concerns regarding the online posting of pictures or other patient information that could violate federal or state privacy laws or could distract from patient care.[4]

Many institutional policies also prohibit the use of work email addresses on social media, reflecting a concern for security and the importance of separating personal and professional activities.[7] The use of institutional graphics or logos on employees' personal social media pages may also be prohibited.[7] Potential conflicts of interest are also a concern.[7] Most policies prohibit arrangements that involve the exchange of money for online postings or other activities, and require full disclosure with disclaimers if such a relationship exists.[7]

Several health care institutions have policies that require a signed HIPAA authorization before any patient-specific information may be posted on social media.[7] Other institutions,

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Table 1 Concepts for Health Care Organizations' Social Media Policies[4]

- Address discrimination, harassment, wrongful termination, leaking of confidential or proprietary information, damage to the organization's reputation, productivity, and other issues.
- Address expectations regarding employee behavior outside the realm of employment.
- Ban, limit, and/or monitor employee access to the Internet and/or to social networking sites.
- Define employees' responsibilities when witnessing inappropriate use of social media.
- Define policy regarding the use of organizational email addresses and graphics or logos.
- Define disciplinary actions for the inappropriate use of social media.
- Designate who can access social media on the organization's premises and for what purpose.
- Ensure that medical staff and employees acknowledge that they are not representing the organization when they post material to their personal social media sites.
- Ensure that medical staff and employees disclose any conflicts of interest.
- Ensure that the medical staff and employees are familiar with state and federal guidelines regarding patients' privacy.
- Ensure that the medical staff and employees include a disclaimer when they are not speaking on behalf of the organization.
- Ensure that the medical staff, employees, and students understand the need to adhere to the organization's social media policy.
- Revise or expand current policies regarding patient consent and the posting of patient information on social media.

Social Media and Health Care Professionals: Benefits, Risks, and Best Practices

particularly medical schools, have expanded this concept to include consent from research subjects and volunteers.[7] It is good practice for faculty at educational institutions to inform students about potential consequences for violating this and other social media guidelines, since such infractions may not only expose the student to academic or professional disciplinary actions but can also violate state and federal laws, resulting in civil and criminal penalties.[2]

Additional information regarding social media guidelines can be found in the online database at http://socialmediagovernance.com/policies.[7,17] This resource includes 247 social media policies, many for health care institutions or professional societies, such as the Mayo Clinic, Kaiser Permanente, and the American Nurses Association.[17]

Social Media Guidelines for HCPs Issued by Professional Organizations

Many health care professional societies have issued guidelines for the use of social media. In 2012, the ASHP released a statement regarding the use of social media by pharmacists.[6] The ASHP advised pharmacists to provide clinical advice only in adherence with professional standards (i.e., when a complete history is known); to recognize when a patient's needs would be better met by other means of communication; to provide timely and accurate information when appropriate; to rebut any misleading information; to protect patient privacy; and to maintain the pharmacist's reputation during anonymous or personal use of social media.[1] The ASHP also recommended that hospitals or health systems that allow the use of social media establish best practices in the form of policies and procedures that balance the benefits of social media with the potential risks and liabilities of such media.[6]

In 2010, the American Medical Association (AMA) released official guidelines for the ethical use of social media by physicians.[19] These guidelines emphasize the need to maintain patient confidentiality; to be cognizant of privacy settings; to maintain appropriate patient–physician boundaries; to provide accurate and truthful information; to act with collegiality; to avoid anonymity; to declare conflicts of interest; and to maintain separate personal and professional profiles.[4,8,9,19] The AMA's policy also recommends that members be aware that privacy settings may not provide complete protection and that anything posted on the Internet may be permanently available online.[19]

The Federation of State Medical Boards (FASB) published a guidance document on the appropriate use of social media in medical practice in 2011.[14] This document emphasizes protection of patient privacy and confidentiality; professionalism and transparency; the avoidance of dispensing medical advice online; and the caveat that once information is placed online, it can be distributed interminably.[14]

The National Council of State Boards of Nursing (NCSBN) also issued its *White Paper: A Nurse's Guide to the Use of Social Media* in 2011. This document includes practical guidelines for governing the appropriate use of social media in the health care environment by nurses.[2] A summary of concepts included in most professional guidelines is presented in Table 2.

Table 2 Common Guidelines for the Use of Social Media by HCPs[7,15]	
Context	**Concept**
Content credibility	• Share only information from credible sources. • Refute any inaccurate information you encounter.
Legal concerns	• Remember that the content you author may be discoverable. • Comply with federal and state privacy laws. • Respect copyright laws.
Licensing concerns	• Know professional licensure requirements for your state.
Networking practices	• Do not contact patients with requests to join your network. • Direct patients who want to join your personal network to a more secure means of communication or to your professional site.
Patient care	• Avoid providing specific medical advice to nonpatients. • Make appropriate disclosures and disclaimers regarding the accuracy, timeliness, and privacy of electronic communications.
Patient privacy	• Avoid writing about specific patients. • Make sure you are in compliance with state and federal privacy laws. • Obtain patient consent when required. • Protect patient information through "de-identification." • Use a respectful tone when discussing patients.
Personal privacy	• Use the most secure privacy settings available. • Keep personal and professional profiles separate.
Professional ethics	• Disclose any in-kind or financial compensation received. • Do not make false or misleading claims.
Self-identification	• Identify yourself on professional sites. • Make sure that your credentials are correctly stated. • Specify whether or not you are representing an employer.

Social Media Benefits and Risks

CONCLUSION

When used wisely and prudently, social media sites and platforms offer the potential to promote individual and public health, as well as professional development and advancement.[11] However, when used carelessly, the dangers these technologies pose to HCPs are formidable.[8] Guidelines issued by health care organizations and professional societies provide sound and useful principles that HCPs should follow to avoid pitfalls.[15]

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