

## Online Professional Networks for Physicians: Risk Management

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### Abstract

**Background** The rapidly developing array of online physician-only communities represents a potential extraordinary advance in the availability of educational and informational resources to physicians. These online communities provide physicians with a new range of controls over the information they process, but use of this social media technology carries some risk.

**Questions/purposes** The purpose of this review was to help physicians manage the risks of online professional networking and discuss the potential benefits that may come with such networks. This article explores the risks and benefits of physicians engaging in online professional networking with peers and provides suggestions on risk management.

**Methods** Through an Internet search and literature review, we scrutinized available case law, federal regulatory code,

and guidelines of conduct from professional organizations and consultants. We reviewed the OrthoMind.com site as a case example because it is currently the only online social network exclusively for orthopaedic surgeons.

**Results** Existing case law suggests potential liability for orthopaedic surgeons who engage with patients on openly accessible social network platforms. Current society guidelines in both the United States and Britain provide sensible rules that may mitigate such risks. However, the overall lack of a strong body of legal opinions, government regulations as well as practical experience for most surgeons limit the suitability of such platforms. Closed platforms that are restricted to validated orthopaedic surgeons may limit these downside risks and hence allow surgeons to collaborate with one another both as clinicians and practice owners.

**Conclusions** Educating surgeons about the pros and cons of participating in these networking platforms is helping them more astutely manage risks and optimize benefits. This evolving online environment of professional interaction is one of few precedents, but the application of risk management strategies that physicians use in daily practice carries over into the online community. This participation should foster ongoing dialogue as new guidelines emerge. This will allow today's orthopaedic surgeon to feel more comfortable with online professional networks and better understand how to make an informed decision regarding their proper use.

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### Introduction

The landscape of social media is ever changing and physicians often find the terrain particularly challenging to navigate. Social networking is the process of using social

media tools to collaborate, network, and share electronic media among individuals across geographic and social boundaries. When used for professional purposes such as doctor-to-doctor collaboration or hospital system internal communication, social networking becomes “professional” networking. The intersection of social media and healthcare is a dynamic one that can pose considerable benefit and potential risk to those physicians who elect to participate in this space.

Social media platforms are historically divided into two general categories: public and private. Popular open access public forums include sites like MySpace, Facebook, and Twitter; all of these have witnessed a fast-paced rate of growth and acceptance across the world’s population. Social media has converted the Internet from a read-only encyclopedia into an interactive forum. As of 2008, 35% of adults used social networking sites [14]. The fastest growing segment is adults older than 40 years of age [15]. Google found physicians are also increasingly going online to use social networking sites, both in their personal lives and also as professionals [12].

Private social networking forums for physicians include popular sites like Sermo [17] and Medscape’s Physician Connect (which are for all physicians) [17] and OrthoMind and Orthopaedia (Association of Bone and Joint Surgeons, Rosemont, IL, USA) (which are for orthopaedic surgeons only) ([www.orthomind.com/aboutus](http://www.orthomind.com/aboutus), <http://www.orthopaedia.com/display/Main/About+Orthopaedia>) and have expectedly had much slower rates of adoption.

The online professional communities offer a forum for a true diversity of political discourse, unique opportunities for professional development, and myriad of avenues for intellectual activity. However, many physicians have refrained from engagement in these communities as a result of fears of liability and professional repercussion. There is also the ethical dilemma of trying to help patients while maintaining an appropriate distance from individualized medical information that may be misused in public social media forums [2]. It is essential, however, to recognize that a physician’s engagement in private, professional networking sites is subject to an entirely different set of considerations.

The purposes of this article are to (1) distinguish differences between open social media and closed social media tools; (2) provide examples of the benefits physicians can realize when using social media for peer collaboration; and (3) describe the attendant risks and methods for reducing such risks.

### Search Strategy and Criteria

Searches were conducted on Google, Google Scholar, and Medline using the keywords “social media”, “professional

network”, “orthopaedics”, “legal”, “patient”, “HIPAA”, “guidelines”, “benefits”, “open”, “access”, and their variants using a variety of combinations. Depending on the search term(s) used, several hundred thousand items were identified and then narrowed further by using additional search terms. The results were then screened and sorted for relevance. In addition, individualized searches were conducted on the sites of prominent medical associations such as the American Medical Association, American Academy of Orthopaedic Surgeons, British Medical Association, and others.

### Professional Networking for Orthopaedic Surgeons: Open versus Closed

Social media are web-based and mobile electronic media tools used to facilitate communication. These tools can be used for networking purposes as well, hence the term social networking. When these web- or cloud-based technologies are used for professional collaboration, they facilitate professional networking. The ability of healthcare professionals to use social media tools has generated much interest in the current economic and political climate as well as considerable skepticism from established physician organizations [4, 7, 9].

These concerns have largely been focused on open social media sites because of the potential for direct interaction with patients [4, 7, 9]. Partly as a consequence, advisors are setting up strategies for healthcare entities to use private social media tools internally within their institutions and consultants make a living today advising hospital systems and physicians on how to engage their communities through public open access social media sites such as Facebook or Twitter.

We agree with the concerns of the American Medical Association as well as the British Medical Association [4, 7] about these open access social sites. Before we focus our attention on the peer-to-peer professional use of social networking tools, let us briefly explore why we are not delving into how these tools can be used by physicians in open forums. The intermingling of physicians with patients in public domains, online and otherwise, leaves a lot of room for speculation and misunderstanding. Online interactions are memorialized and subject to third-party scrutiny and misinterpretation. Many dilemmas can arise when a patient is trying to communicate with a physician through online or electronic means, eg, instant messaging, text messages, voicemail, email, chat forums, posts, or Internet tweets. Some commentators have compared medical communication on Facebook and Twitter with elevator talk and discussing patient information where other people can hear.

For these reasons, we do not address the use of social media in the public domain. Instead, we focus on the use of

social media tools for peer-to-peer collaboration, ie, professional networking for orthopaedic surgeons. The use of web-based tools for these purposes is increasing and the practicing orthopaedic surgeon needs to have a better understanding of the opportunities and threats they present. At some point in the near future, web-based physician-to-physician collaboration will, in all likelihood, become the norm rather than a curiosity.

### **Closed Professional Networks for Orthopaedic Surgeons: Advantages and Perspectives**

Let us consider an existing platform of peer-to-peer professional networking for orthopaedic surgeons as a case example for study: OrthoMind.com. There are many professional networking sites on the Internet with widely disparate levels of activity, use, and engagement. For example, Sermo is open to all physicians and has over 127,000 physicians [6]. Many such networks in the health-care space allow access to physicians and other healthcare professionals such as nurses, physician assistants, medical students, and in some cases representatives from the pharmaceutical industry or medical device industry.

In contrast, PeerCase has a few hundred members but it is an oncologist-only community and this focus may have important benefits for its members. OrthoMind, our case study in this article, is to our knowledge the only orthopaedic surgeon-only community with approximately 5000 members [6]. Over time, orthopaedic surgeons have been increasingly engaging in collaborative activities in the OrthoMind community and other physician networks but have done so with trepidation. It is this skepticism and reservation that is primarily responsible for the slow adoption of using social media tools among physicians in general and orthopaedic surgeons in particular. Aside from concerns regarding liability in an ever threatening medicolegal climate, some doctors also worry about identity theft and how their online engagement could influence their professional reputation. This is of increased concern because the physician has to disclose some of his or her own personally identifiable information to join the community and be confirmed as a physician. Some sites, like OrthoMind, Medscape, and Sermo, allow physicians, once confirmed as such, to choose an alias “screen name” so they can feel comfortable among peers but also be more inclined to freely “speak their mind” on the topic of interest [1, 8].

### **What Are the Benefits of Social Networking for Peer Collaboration?**

One immediate question that comes to mind when discussing social media is, “Clearly there are risks of

engaging in online networking, so what are the benefits?” The reality is that the power of online networking is part of why it is becoming increasingly popular. Although physicians as a group could be considered somewhat risk-averse, more and more doctors are finding these tools beneficial. The benefits of online professional networking are many and are primarily centered around sharing information in a knowledge ecosystem. Additionally, these tools can level the playing field for doctors in rural or underserved areas by more rapidly and deeply disseminating modern-day techniques, thought processes, and knowledge-based insights.

With Internet-based tools, physicians are no longer limited by geography, specialty, and time zone in their attempts to connect, engage, and learn from with each other. Historically, networking took place at conferences, doctors’ lounges, or in the hallways of medical practices. However, this form of networking has limited boundaries and confines us to a small social circle. Using more agile mobile platforms, physicians are now able to communicate across all sectors without restriction of type of practice, specialty/subspecialty, or years of experience. Whether you are a key opinion leader, a young solo practitioner in a rural town, or an academician in a large, multispecialty group, doctors are finding more and more reasons to connect online, either in open forums or in private, physician-only, professional networks like Sermo and OrthoMind.

There are many advantages to surgeons using online professional networks that fall into one of three categories: these powerful platforms can save time, improve patient care, and advance the practice of orthopaedic surgery. Much of the benefit revolves around preserving one of the surgeon’s most precious assets: time. Sharing ideas of patient management, clinical pearls, and discussing new technology facilitate more rapid and efficient dissemination of information.

Using professional networking tools to aggregate research data in journal readers and research scanners can save surgeons time in keeping current with the peer-reviewed literature. This allows news and scientific publication to become active and interactive instead of the traditional “read-only” formats. The aggregation and search tools developed in OrthoMind can regularly scan the literature for useful articles and deliver to surgeons any relevant research articles that match their specific interests.

Professional networking sites can also improve the practice of orthopaedic surgery in tangible ways through better time and information management. Surgeons can poll each other and get immediate feedback and opinions. This shortens feedback cycles compared with conventional surveys and market research efforts [16].

A substantial functional advantage to orthopaedic surgeons comes in the ability of these sites to lessen the

burden of trying to keep up with the plethora of meetings. One more powerful aspect of social media tools may be best realized in this context of continuing medical education. Physicians who were unable to attend meetings can get insights from their peers who did attend. Colleagues at the meetings are able to post comments, feedback, and insights into a site for other surgeons to read and respond.

The facilitation of early detection of noteworthy events is one of the most compelling ways professional networking sites can enhance patient care. Doctors sharing their personal experiences with complications or adverse events allows earlier identification of potential pitfalls in medical devices or techniques. Aggregating smaller observations informs the community in a drastically shortened feedback cycle, potentially preventing patient morbidity. Such early detection may also limit liability exposure for surgeons and the medical device industry alike.

Collaboration on challenging cases is one of the hallmark benefits of professional networking sites. Complex issues often arise in the scope of practice and being able to connect with another doctor who has had a similar experience or being able to query a key opinion leader can be very valuable. In OrthoMind, as an example, several subject matter experts have opined in cases submitted by peers. Social media tools can connect private practices with academic institutions, consolidate alumni networks, and merge experiences from different centers of excellence. More experienced physicians share insights so that less experienced physicians do not have to reinvent the wheel.

In specialty-specific sites, physicians share business acumen and best-in-class practice management strategies. Surgeons are also able to collaborate strategically on operations, staffing, overhead, and financial planning. In conventional paradigms, solo practitioners have had to rely on their own experiences in screening and rating products and services. In an aggregated virtual group collaboration, however, physicians in small groups can enjoin their peers to leverage economies of scale and potentially negotiate more favorable goods and services.

An important role of such networks is in reducing risk. Risk management has long had a tendency to emphasize the soft issues such as medical records keeping, communications, or systems deficiencies rather than the more difficult or issues, poor patient outcomes related to new technologies/marketing, indications for surgery, detection and management of complications, and diagnostic errors. Closed practice networks offer an opportunity to frankly address issues that can reduce poor patient outcomes that lead to malpractice claims.

Although the list of benefits is too long to be fully covered in this article, we cannot overlook one of the most compelling values of all: networking. These sites facilitate

networking around the doctor's self-specified interests, be they clinical, political, or academic. Networking around charitable initiatives in these sites has notably enhanced surgeons' abilities to provide humanitarian aid in underserved areas.

### **Prerequisite for Realizing Benefits: A Critical Mass**

Although it is becoming increasingly easier, faster, and more accessible, professional networking online still takes a modicum of effort by the physician. Without active participation from doctors, the full potential of the collaboration cannot be harnessed. As a critical mass of surgeons participate in online professional networking, the benefits can be realized for all who are present in that community.

Joining a professional network is the first step, but engagement goes well beyond that. User-generated content, where physicians post, comment, and share their insights, is the cornerstone value in any social networking site. When doctors generate their own content by uploading videos, images, questions, polls, and cases, they are catalyzing a professional reciprocity of giving and receiving wisdom. It is this collective wisdom that helps all the aforementioned benefits come to fruition.

As such, we have a situation in which benefits cannot be realized without participation by a critical mass of surgeons. This can be a major rate-limiting step for a new professional network, especially given the small numbers of surgeons in a given specialty or subspecialty as compared with the numbers of the general public who use social networks such as Facebook or even LinkedIn. As such, it is only through active participation by all qualified members that the value of the network is created for all members.

### **What Are the Risks and Threats?**

The primary risk exposure that physicians face in a private professional networking site relates to HIPAA compliance. This is a risk that doctors face in their daily practices of medicine as well, whether discussing surgery with family members in a public waiting room or speaking about a patient within earshot of other patients. In much the same way that physicians should try to lower their voices when speaking privately to a patient in an intensive care unit bay or preoperative holding area or any area where there is a thin barrier (curtain or wall), it also appropriate for doctors to take reasonable precautions online. In an Internet-based community, when one hits the enter button, the comments are out there, memorialized and searchable in the data archive.

When networking online in a private forum, a simple rule to follow is that a physician should not share something online that he or she would not want a colleague to hear or speak in a manner that would offend a patient or a family member of a patient. Despite the colloquial allowances of sharing among peers, communication should always be courteous, polite, and in accordance with professional etiquette. The easier it is to share information, the easier it is to share it with the wrong people and there is no way to ensure perfect security, even when these social sites use the same levels of encryption as the online banking industry.

Some have questioned whether a doctor can be held accountable for offering casual guidance to peers. Although legal precedent and case law in the jurisdiction of online professional networking are largely absent, it has historically been true that the plaintiff must prove that the physician has a duty to the patient in question, which would only come through the direct establishment of a patient relationship. Physicians are also afforded some relative protection if they are the creator of a forum or network with the intention of professional collaboration. Section 230 of the Communications Decency Act protects you as a sponsor of an online forum. A healthcare provider cannot be held liable for postings made by other parties just because it owns or sponsors the forum [3].

Physicians should exercise healthy discretion when considering advice from peers whether online or offline. Even opinions from key opinion leaders or subject matter experts are subject to variance, and in the final analysis, the treating physician is the one to whom standards of care requirements would apply. Surgeons should disclose any relevant relationships with device manufacturers, implant companies, or product uses that might be construed as off-label. In general, doctors should exercise the same precautions they use in their daily practices and business transactions.

HIPAA stands for Health Insurance Portability and Accountability Act, which was passed by Congress in 1996 [10]. Implemented April 14, 2003, its rules stipulate that protected health information can be used or disclosed for certain authorized purposes, including “for treatment, payment, or healthcare operations.” According to the US Department of Health and Human Services, a use or disclosure of protected health information that occurs as a result of, or as incident to, an otherwise permitted use or disclosure is permitted as long as the covered entity has adopted reasonable safeguards.

HIPAA and its corresponding Privacy and Security Rules require that Individually Identifiable Patient Health Information (IIHI) be reasonably safeguarded pursuant to the extensive set of HIPAA standards, all information that may potentially identify the individual or with respect to which there is a reasonable basis to believe that the

information can be used to identify the individual [11]. IIHI protected under federal law includes: account numbers; certificate/license numbers; vehicle identifiers and serial numbers; device identifiers and serial numbers; web URLs; Internet Protocol address numbers; biometric identifiers, including finger and voice prints; full-face photographic images and any comparable images; any other unique identifying number, characteristic, or code, except as permitted under HIPAA to reidentify data; names; geographic subdivisions smaller than a state; dates (except year) directly related to a patient; telephone numbers; fax numbers; email addresses; Social Security numbers; medical record numbers; and health plan beneficiary numbers.

The rules regarding patient privacy that apply to everything else you do in health care also apply to social media activities. The right to express yourself on social networking sites does not mean freedom from consequences. Even if the patient makes his or her own information public, the doctor can still be liable for disclosing personally identifiable health information.

### Reducing Risks

Our recommendations focus on risk management for physicians who are engaging in professional online collaboration with their peers. With regard to reducing risks for engaging with patients through social media tools, it is advisable to refer to the American Medical Association’s current position on professionalism in the use of social media [4]. In the setting of professional networking sites, these guidelines and our own recommendations suggest that physicians should be informed participants and contact site administrators with any concerns or issues. Before participating in online collaborative dialogue, doctors should: (1) refer to web site disclaimers and policies regarding opt-in consent for online discussions, monitoring, and nonsecure e-mail communication; (2) be mindful of patient confidentiality; (3) keep in mind that deidentification of patient data is exceedingly difficult to prove. The rarer the case, the easier it is for the patient to be able to identify themselves in an online public forum; (4) be aware that they are never truly anonymous on the web; (5) understand your reporting responsibilities as dictated by HIPAA if an issue arises; (6) check to see if and/or how social media may be covered in their physician liability insurance policy (note that some policies preclude physicians from offering advice online); and (7) recognize the easier it is to publish something and the less peer review there is, the more opportunities there are to make mistakes.

The 2009 American Recovery and Reinvestment Act [5] included more firm regulations for protecting patient data,

enhanced civil and criminal penalties for HIPAA violations, and implemented new federal patient breach notification requirements. In addition, most states also have identity theft and other data security laws that must be taken into account.

In the same way that in an academic institution teaching is a key part of operations, peer-to-peer collaboration inside physician networks serves as a teaching and knowledge-sharing operation. Inasmuch as bedside rounds, teaching rounds, conferences, and clerkships are all permissible, doctors take measures to minimize incidental disclosures such as speaking softly or avoiding highly trafficked areas. At conferences, lectures, webinars, and symposia, surgeons should attempt minimize disclosure of patient identifiers as much as possible without compromising the educational goals. The same holds true in the online environment.

In short, HIPAA expects healthcare providers to take “reasonable” measures to protect patient privacy in the daily practice of medicine [13]. Although guidelines exist in the electronic realm of health records and practice management systems, no clear guidelines exist for professional networking solutions. Incidental disclosures cannot all be avoided and HIPAA recognizes that, but the risk of such disclosures should be minimized. Mobile phones, mobile computing devices, or hardware that may contain patient-related media should be password-protected.

## Discussion

Online professional networking communities provide physicians new ways to process and manage information. For orthopaedic surgeons, this means novel opportunities will evolve to enable doctors to better incorporate technologic advances into their practices, thus improving patient care and the profession. Educating surgeons about the pros and cons of participating in these networking platforms will help them more astutely manage risks and optimize benefits.

The literature and our review have limitations because there are no precedents or case law examples that we are aware of that outline a majority of the pros and cons of engaging in these new communities. First, a better understanding of open and closed networks is essential to maximizing benefits and reducing risks. Open networks such as Facebook, MySpace, and Twitter can be accessed by virtually anyone. In contrast, networks such as Sermo and Physician Connect are accessible only by physicians and are closed. However, these networks are still open to nonorthopaedic surgeons and so their value is correspondingly lower given that the participants may not share the concerns and level of expertise that a closed network that restricts

access to physicians in a given specialty such as PeerCase. There are currently very few online social networks exclusively for orthopaedic surgeons but the interest in this space is growing. The reader is hence requested to do a search for additional sites that were not available or were in early development at the time of this writing, which may address some of these concerns. Second, we have outlined the benefits and risks associated with involvement in professional networking web-based sites like Sermo, Medscape Physician Connect, and OrthoMind and given examples of the advantages and disadvantages of these sites. However, because of the evolving landscape and the variety of needs of each practitioner, these advantages and disadvantages will vary for individual surgeons. That being said, based on the overwhelming opportunities to improve patient care and professional satisfaction by becoming active in these sites, we believe astute engagement is justifiable and worth encouraging. The fear of the unknown and the concern for liability should not make us withdraw from these opportunities but rather stimulate us to engage with a higher degree of professionalism and circumspection. Only then can we fully exploit the tremendous advantages these sites offer in our quest to improve patient care and our profession. Third, and finally, these networks allow for the creation of a knowledge ecosystem in which orthopaedic surgeons can engage with one another without regard to geography, type of practice, or time. The limited networking afforded by face-to-face interactions at institutions, practices, or at meetings can now be opened up to a global practice network. The various advantages of this can be broadly categorized into saving the surgeon time by being able to interact on his or her schedule and with a variety of individuals, improving patient care by sharing ideas and knowledge, and improving the practice of orthopaedic surgery by forming community opinions and getting feedback from a large and diverse group of fellow surgeons. Professional networking can directly lead to improved research and development, thus ultimately enhancing patient care and the overall practice of orthopaedic surgery. We do anticipate increasing use of these professional networks over time and expect that after educating oneself on the subject, each physician can consider his or her risk tolerance in deciding whether to get involved with collaborating with peers online.

Judiciously managing the risks of online collaboration is essential for any doctor who is engaging in professional networking in matters related to patient care. Beyond professional codes of conduct, respecting and complying with HIPAA regulations is of paramount importance. The web sites will take precautions in this regard but the ultimate responsibility for the physician conduct rests with the doctor.

A key problem is that regulatory statutes have not kept pace with the adoption of social media use across the

United States. Until guidelines are formalized, and concise criteria are readily available to inform and guide a physician in the social arena, caution remains the key operating principle. A simple, cautionary caveat relating to physician online presence is to avoid the practice of medicine online. Physicians who hold themselves out in social media platforms as professionals providing medical care or advice are potentially taking a considerable risk in this regard. The intersection among physicians, health care, and social media is an uncertain area in law at the present time, fraught with risk, liability, and anxiety.

Each physician should be aware that he or she has an online reputation whether they are aware of it or not. In a professional networking context, managing that reputation effectively creates an opportunity to become a respected opinion leader in the online community as well as the at-large community.

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