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Social Media in Dental Education: A Call for Research and Action

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Abstract

Social media are part of the fabric of today's world, from which health care is not excluded. Based on its distribution capacity, a single individual can cause an amount of damage to an institution that only a few decades ago required access to a mainstream news media outlet. Despite the obvious parallels in professional standards in the medical and dental communities, the scholarly activity and resulting collegial discourse observed among medical professionals remain unmatched in the dental education literature. As a result, a rigorous research agenda on the topic is indicated. Once these results are evaluated and thoroughly vetted, actions should be tailored to address the needs, minimize the threats, and maximize the opportunities that have been already noted by the medical profession. Regardless of input, albeit internal or external, a cadre of individuals who are willing to develop philosophy, policy, and procedure related to the use of social media policies in dental education can then be identified to evaluate the issues unique to the institution and perhaps the profession.

Keywords

social media; Internet; blogging; dental students; dental education; Web 2.0; Twitter messaging; World Wide Web

In today's connected Web 2.0 world, the use of technology increasingly shifts our communication and information-gathering efforts away from paper and toward the Internet. Everyone seems to be logged-in, online, and connected as much as their schedules permit. We are developing new cognitive habits as "the only viable approach to navigating the age of constant connectivity."¹ We are eager to search for information snippets and, at times, casually interact with others on topics that relate to anything and everything fusing our professional and social lives. Thanks to a multitude of Web 2.0 and social media applications including blogs, LinkedIn, Flickr, Twitter, Delicious, Wikipedia, and Facebook, we can not only read news, but interact with others about this news. Web 2.0 technologies refer to applications that facilitate interactive information sharing, interoperability, user-centered design,² and collaboration. Examples of Web 2.0 include e-communities, hosted image and video services, social-networking sites, wikis, blogs, RSS feeds, mashups, semantic Web applications, and folksonomies.³ The phrase "Web 2.0" is often used interchangeably with "social media" or "user-generated content."⁴ Some people define

social media sites as places that take instruments of communication and make them “social.”⁵ For some, the use of social media appears to define how they now use the traditional Web; in 2010, for example, Facebook pushed Google out of the number one ranking as “most visited” website.⁶ Thanks to the Internet and specifically because of new social media services like Twitter, we can inform friends about our latest news (no matter how trivial or seminal) or network with colleagues or total strangers and discuss any topic in an instant. With little effort, almost no cost, and one click of the mouse, dental schools and their students/faculty/staff can join this trend and open their doors by instantly communicating with thousands—potentially millions—of users, who could be patients, colleagues, or prospective students following their schools of interest on Twitter or connecting to them via Facebook.

This article will describe the impact social media has in today’s health care setting while highlighting some opportunities and challenges that exist. We will expound on the challenges that arise when material posted with the use of social media is inappropriate or accessible to an audience who may question the motives or misinterpret the content (given guidelines and expectations in place regarding the doctor/patient relationship). Based on the lack of professional discourse in the dental education literature regarding the use of social media, this article will suggest a need to initiate a close examination of the uses of social media in the dental education community. After these outcomes are examined, we will suggest how these data may affect dental schools’ professionalism curricula and ask whether they should consider developing parallel guidelines related to their students’ social media activities. The article concludes with suggestions for best practices, followed by a proposed research agenda. Throughout the article, we will pose *questions to consider* that will likely remain unanswered in the dental education domain until a robust research agenda in social media is executed.

Social Media and Health Care

While open accessibility increases our efficiency in reaching large audiences and might even change the very fabric of our society, as health care providers we may wonder if our audience includes more people than intended. We also need to be sensitive to how our posted information may be interpreted in a way other than how it was intended.⁷ Most Internet users will remember the popular viral video “David After Dentist,” featuring eight-year-old David DeVore’s now-famous post-sedation tirade on his ride home from a visit to the dentist.⁸ This video is referred to as “viral” because of the widespread Internet sharing it experienced,⁹ spreading in a manner similar to a virus. After being uploaded to Facebook and YouTube, it attracted more than 80 million viewers. David’s delusional screams of confusion even had exposure during the 2010 American Dental Education Association (ADEA) Annual Session & Exhibition plenary session.¹⁰ The publicity this video has garnered is in part due to its open public accessibility, as most user-generated content is, and its distribution at no cost with the ability to travel simultaneously from user to multiple users in the social media or Web 2.0 world. As was noted in this case, it is not uncommon to see this Web 2.0 world overlap with what we know as the “traditional media” world—newspapers and television programming—thus increasing exposure to an entirely new level of viewers.

So where is the harm in posting what David’s father, David DeVore Sr., thought was just an amusing account of his son as he recovered from sedation? As we investigate further, we find that David Sr. was interviewed by, among others, *The Wall Street Journal*,¹¹ *FOX News*,¹² and the *Today* show.¹³ During these interviews he faced the need to consistently defend his decision to post this video on the Web, which exposed him to great public scrutiny among parents. The controversy in this case relates to the exploitative nature that

the posting implied to some. David DeVore Sr. is on record as saying that it was his intention to film his son in order to alleviate his fears about doctors' appointments.¹¹ He went on to say, "I was trying to teach him that the anticipation is probably much worse than the actual event," though he also admitted, "This might not have been the right case to give an example." After later posting it on Facebook and dealing with increased demands from friends and family to view it, he decided to post it on YouTube, stating that he felt it would be easier to share with other friends and relatives.¹³ During the *Today* show interview, David's mother, Tessie, told Matt Lauer that when David Sr. decided to post the video on YouTube late one Friday night, they did not notice there was a way to make the posted link "private."¹³ This unintended release contributed to the viral birth of the video, for it was instead posted to the world to view and interpret as they wished for a period of time that will likely live beyond David's and our own life spans.

How Do Social Media Dilemmas Relate to Dental Education?

Questions to consider—Now, imagine if this video had been filmed by one of your dental students after his nephew was treated under general anesthesia. Imagine further that the video was not titled "David After Dentist," but instead "David After Treatment at the University of [enter your institution's name]"? Would you feel comfortable allowing your students to decide, as the DeVores did, what may be right or wrong content to post? Suppose another student or a friend of the student took this video and remixed it using the now well-recognized audio from the video and called it "David After Dentist All Grown Up," showing a drunken confused adult engaging in sexually explicit behavior (as was done to the "David After Dentist" video)?¹⁴ (Despite the DeVores' intentions, we imagine that remixes like this one were not part of their original plan.) Which risk management and public relations personnel at your institution would you involve to manage such a media exposure? What would happen to the student? Would it matter to you if the student claimed that posting this video at a public level was unintentional as David Sr. did? What changes, if any, would you suggest that the faculty member who teaches professionalism consider as a result of this indiscretion?

Every digital media-based action we take, even a visit to a website without any real "action," leaves a "digital footprint" that cannot be erased any longer. Thanks to services like the Internet Archive Wayback Machine,¹⁵ even an erased webpage or the long-ago removed spelling error on our admissions homepage is stored forever. Or, as *Wired's* Clive Thompson puts it, users are under the aegis of the "perfect recall of silicon memory."¹⁶ This trail of "where we have been" and "what we post" can lend information to "who we may be perceived to be."¹⁷ This very "perception" is emphasized in the health care environment, where ethics and professionalism are under constant public and peer scrutiny as professional expectations and laws such as the Health Insurance Portability and Accountability Act (HIPAA) prevail. As the use of Web 2.0 applications rises among the general population, with 86 percent of eighteen to twenty-nine-year-olds using social networking sites,¹⁸ health care professionals are slowly following this trend.

A recent survey reported that 94 percent of physicians stated they use smartphones to manage personal and business workflows and to access medical data.¹⁹ According to the survey, "growth in smartphone use is driven by physicians' desire to in part improve communication and collaboration and improve patient care and safety." The number of physicians who said they used this technology in 2010 had increased by 60 percent from 2006. Many federal agencies have already started using Web 2.0/social media tools to disseminate information, e.g., communications during the H1N1 outbreak, the Centers for Disease Control and Prevention (CDC) social media guidance,²⁰ and the Agency for Healthcare Research and Quality (AHRQ) social media tools.²¹ However, so far there are

insufficient data demonstrating the effectiveness of these technologies in improving knowledge of current clinical guidelines. Individual Web 2.0 technologies have been used successfully in medical education and practice,²²⁻³³ but have not been evaluated in dentistry.

The dental education community has yet to begin a discourse in the literature regarding the implications assumed by dental education as these worlds intersect. These preparations should include discussing the need to develop professionalism and ethics guidelines specifically related to how our students, faculty, and staff are expected to use these new communication tools. While our current professionalism guidelines have seen numerous iterations over several decades and have helped health care providers make well-informed decisions about what is right and what is wrong, current evidence suggests that although their fundamental principles still apply, they may not be specific enough to adequately guide us in this new world infused with technology and instant accessibility.^{17,34,35}

Opportunities for Using Social Media

Over several years, the medical community has closely followed and evaluated the role of social media on their profession. They have found that the increased use and growing technologies of social media can change communication patterns on health care topics across the country.³⁶ Several claims in support of social media use in health care communication have been noted, including the following: increased social support by patients through Internet-based social networks; individual patient-focused information sharing through the increase of patient-controlled, user-generated content; and increased reach of communication efforts related to health promotion topics such as dietary interventions and smoking cessation.³⁶ Studies on Web 2.0 interactive e-communities have found that study participants are open to receiving new factual information, solutions to problems, learning, and insight.³⁷ These benefits are derived from interpersonal and group interactions within the communities.³⁸

Related specifically to dentistry, a recent oral cancer public service announcement used social media coupled with the public's fascination with celebrities to attempt to positively influence oral health. Actor Jack Klugman stars in this educational YouTube video describing the benefit of regular oral cancer screenings as he shares his personal history with the disease.³⁹ In another example, on the talk show *The View* (a television program, although the information was subsequently posted to YouTube), Whoopi Goldberg shared her personal story of periodontal disease in addition to strongly endorsing the point that oral health is linked to overall systemic health.⁴⁰ As a result, clinics across the country experienced an increase in dental patients showing concern for their periodontal health. These two examples demonstrate the impact celebrities can have on our interpretation of health care-related topics. Social media forums that have the ability to reach millions of individuals with just one click of the mouse beyond the television viewing audience can easily exploit the opinions of admired individuals for the greater good of the dental health mission.

Challenges in Using Social Media

Medical research has analyzed the challenges we are facing as health care providers regarding the use of social media and its interaction with ethical principles. Recent areas of interest include but are not limited to the following: the use of social networking sites; evaluation of the content posted, including unprofessional content and HIPAA compliance; medical students' use and knowledge of privacy settings available on social media sites; the consequences and overall effect of unprofessional postings on the public's trust in the profession; and the call for regulations and guidelines related to online activity.^{34,35,41}

Since no evidence related to the online activity of dental students exists, we reference recent research in the medical profession, which reveals that medical students, residents, and other health care providers violated professional standards when posting information on social networking sites.⁴²⁻⁴⁴ Examples include postings of identifiable photos of patients; sexual-related content; negativity related to a medical school, its faculty, courses, and/or fellow classmates; and content that includes alcohol or other illicit substance use.⁴¹ It is evident that the negative perceptions these postings may create apply not only to the individual, but also to the institution/hospital and/or professional as suggested in the thought experiment above about the variation on “David After Dentist.” Although it is not our intent to suggest that the unprofessional behaviors of the dental community (or any health care community, for that matter) are so prevalent as to cause alarm, it should be noted that the misguided actions of a few individuals can negatively affect the trust of the public in the entire profession or the institution.

Due to the distribution capacity of social media, a single individual can cause an amount of damage to an institution that only a few decades ago required access to a mainstream news media outlet. It must be accepted that one no longer needs to “know someone at the newspaper” to gain access to the public; all he or she needs to do is log-in to the Internet. As noted, Whoopi Goldberg’s and Jack Klugman’s YouTube video postings exerted a positive impact on how patients perceive periodontal disease and oral cancer and how their dentist may play an important professional role in treating these conditions. On the other hand, Matt Lauer’s comments made during his interview with the DeVore family may have had the opposite effect. Lauer implied that the dentist from the “David After Dentist” video may have been negligent in allowing the boy to leave the office “too early” in a seemingly dangerous state of mind. Celebrity comments such as these may quickly divert the listener, and the media at large, away from scrutinizing the parents in this case to second-guessing the dentist and his or her professionalism and expertise. One can imagine how these comments have the potential to create negative publicity about the dental profession as a whole.

Appropriateness and Accessibility

There appear to be two issues at play related to the dangers of social media in any health care community. One is related to the content of what is posted, while the other is related to who has access to that content. Defining professional or unprofessional content can be complicated.^{35,41} A study that interviewed focus groups of medical students, many of whom have grown up as digital natives using Web 2.0 technologies, revealed inconsistencies in interpretations across the board. Although students uniformly agreed that the posting of patients’ pictures or any other identifiable information is a violation of privacy, many could not agree on whether it was appropriate to post pictures depicting intoxication and sexually suggestive material. While some felt it was inappropriate to post disparaging comments about a classmate, faculty member, or school, others felt it was not an issue; still others felt it was only an issue if it was “to the point that it impacts your own personal relationship with your clients or your group.” These students described their risk in posting unprofessional material as a “personal risk” as opposed to acknowledging how these postings may have the potential to elicit a negative reflection on the profession as a whole. Some medical students felt having a Facebook page is “not by choice,” stating that without an active account, they “would have no communication whatsoever” in the social forum. In the busy and stressful academic environment, some students feel that this forum is their only social outlet. Although this report suggests that some students were not opposed to school guidelines related to online activity, others argued that these regulations should recognize that “personal time was off-limits.”⁴¹

Questions to consider—How does one decide what content is considered personal vs. professional when it comes to online activities? How do we protect ourselves and our students from the ambiguity of determining what is or is not permissible? What are the rights and obligations a dental education institution has concerning its students' social media activities? How might this overlap with our students' First Amendment rights? Should the topic of student social media use be off limits to school administrators? How will we measure when it is safe to expect that our students are prepared to act professionally? In 2010, the Associated American Dental Schools Application Service (AADSAS) instituted a mandatory background check for all applicants. Does this suggest that a mandatory "past-Internet activity check" or examination of one's "digital footprint" should be considered a next step, or might dental schools consider presenting a "social media dilemma" during their interview process to help uncover the applicant's position on ethics in the Web 2.0 world? We recognize that breaking the law is different from posting risky behavior on the Internet; however, we might ask ourselves how we would feel as dental educators and members of the dental profession accepting a person among our ranks who has posted a string of videos of himself or herself publicly displaying unprofessional activity?

The issue of accessibility warrants a more indepth discussion as the very nature of social media lends itself to free access, although social networking sites such as Facebook provide ample opportunity to limit accessibility of personal profiles and posted comments. The topic has been investigated in medical education regarding the use of privacy settings among medical students who hold Facebook accounts. In 2008, Thompson et al. reported that only a third of the Facebook accounts listed by medical students were made private, with the rest allowing anyone to access their profiles.⁴⁴ These findings match anecdotal evidence reported by two predoctoral course instructors at our school regarding their observations from an online session about social media for first-year dental students.⁴⁵ These instructors observed that a majority of the students seemed to believe that information posted on social networking sites such as Facebook affects people's opinion of professional health care providers. The majority of these students also seemed to believe that dental students should be held to a higher standard than others regarding their Facebook image and should be held accountable for unprofessional behavior discovered through social network postings. Most of these dental students said they have a Facebook account and felt they would rather it not be connected to a faculty member of their school nor would they want to accept them as a "friend."

While schools should certainly respect the privacy of their students, the fact that faculty members are actively excluded from a large part of their students' semi-public online lives might suggest that the information posted may not be congruent with our professional expectations. Although it seems prudent that the purposeful use of privacy settings to avoid exposing specific content to an unintended audience may appear as a safe approach since it implies access limited only to "friends," a false sense of security may occur when a "friend" may expose information that otherwise is meant to be kept in a closed community.

Questions to consider—Do dental students know how to proactively and appropriately set their privacy settings as they use social media? Are they aware of the potential exposure of information they post, in that it may be inadvertently, or purposely, remixed with a dishonorable agenda? Are they aware of the potential privacy status changes of existing information that can occur, e.g., when Facebook decided to change the privacy settings of all its users in 2009 as a result of "rolling out new controls"?⁴⁶

The Dental Community

Despite the obvious parallels in professional standards in the medical and dental communities, the scholarly activity and resulting collegial discourse observed among medical professionals remain unmatched in the dental education literature. At the time this article was written, sixty out of seventy-one North American dental schools were using a Facebook page or Wikipedia entry in addition to a web presence to reach out to their perceived consumers, as an initial step in recognizing the advantages of using social media. The extent of this presence will become more important as we become participants in this new world to avoid becoming obsolete in our efforts to attract applicants belonging to the Net Generation. Driven by marketing needs or pressured by our parent institutions, we may choose to use these Web 2.0 tools to communicate with patients or applicants and publish our research successes. Some dental schools have already adopted this route as demonstrated by the YouTube video from the University of Texas Health Science Center at Houston Dental Branch⁴⁷ in which the dean published a V-flash or the Facebook page of the University of Michigan⁴⁸ that serves as another media mode of communication.

Questions to consider—How do we handle the fact that after we have carefully crafted our text and images for our school's Wikipedia entry, anyone can edit it and post potentially disagreeable "new data" visible to the entire world? Since Wikipedia editors promote a neutral point of view,⁴⁹ how do we feel about the fact that we may not be able to remove what they feel are reasonable postings? Will we post "contact us" information on our web pages? If we do, who will we ask to answer these inquiries given that answers might be reposted on publicly accessible sites created by a community of applicants who compare notes about their dental school applications?⁵⁰ Will this person's training include sensitivity to patients, regulations related to HIPAA, and student/staff/faculty privacy issues?

Professionalism Curricula and Social Media

To be accredited by the Commission on Dental Accreditation (CODA), dental schools must prove that each of their graduates is "competent in the application of the principles of ethical decision making and professional responsibility." Curricula are presented to the commission to support the CODA standard stipulating that "Graduates should know how to draw on a range of resources, among which are professional codes, regulatory law, and ethical theories. These resources should pertain to the academic environment, patient care, practice management, and research. They should guide judgment and action for issues that are complex, novel, ethically arguable, divisive, or of public concern."⁵¹ Given the fact that dental students are in training and are beginning to develop a sense of professional behavior, it would seem reasonable that these professional guidelines include expectations regarding their online activity—especially in light of their capacity to reach a widespread audience that cannot be erased anymore.

Why does this topic warrant special consideration beyond what we already teach in the current professionalism curricula? Greysen et al. suggest that the online forum presents a setting that makes application of traditional guidelines difficult for at least three reasons.¹⁷ First, the expectation that one must separate professional and social activities may be blurred. It may be unclear that social interactions, albeit off duty, may indeed tarnish one's professional reputation. These authors offer the example that posting pictures of medical professionals while drinking alcohol may imply intoxication and can lead to questions (and assumptions, even if off base) and doubt among members of the public. Second, other published reports suggest that the online experience tends to lead one to actions of "disinhibition." The perceived anonymity and detachment from social cues and stated consequences may lead one to say or do something that he or she would ordinarily not think to do in person.⁵² Third, the wide-spanning reach of the online audience suggests greater

impact when a “slip” of confidentiality has occurred. The health care professional must realize the nature of this setting and understand that the consequences of such breaches can be damaging to one’s professional standing.

Suggestions for Best Practices

It appears that traditional professionalism curricula should be augmented with a digital media component taught by knowledgeable dental professionals. Through these teachings, various aspects of new media can be addressed to include how to maintain patient privacy as reinforced through HIPAA; elect privacy settings to reduce public accessibility as one uses social media; and perform regular self-monitoring web searches of one’s digital footprint.⁴³ Adopting a program that includes a self-searching action allows for assessment of professional competence to be measured through online peer searches targeted on compliance.⁴³ As with any current topic in curricula, training and calibration of faculty and residents are critical to success. Although the use of social media among older adults is reportedly on the rise, only about half of the individuals between fifty and sixty-four years of age use social networking sites,¹⁸ emphasizing that it is important to recognize that our faculty population may require instruction before they can act as role models.

In addition to curricular augmentation and faculty development, schools need to consider crafting specific social media guidelines that frame the expectations of future professionals. Students should be encouraged to think and reflect about their online activities and how these may be perceived. Social media policies should include examples of what is and what is not considered online professional behavior. Providing contact information to an overseeing presence or committee who developed these guidelines will allow arbitration in the often complex world of social media.³⁴ Several suggestions endorse the concept that all stakeholders be represented during the development of the institution’s philosophy, policy, and procedures—to include students/residents, patients, faculty, and staff.³⁴ Cross-referencing to related policies, such as sexual harassment, ethics and professionalism, and the proper handling of patient photographs, has been noted on some posted hospital-based social media guidelines.^{53,54} Additionally, it has been emphasized that, once in place, policies must be regularly policed by the governing body or committee and that the consequences of policy violations should be swift and in accordance with outlined guidelines. Collecting data regarding the outcomes will promote an ongoing formative evaluation of these policies.³⁴

AMA Policy

As a result of the medical profession’s ongoing discussion and research related to the proper use of social media, the American Medical Association (AMA) has recently addressed this subject. In November 2010, the AMA House of Delegates circulated a policy titled “Professionalism in the Use of Social Media.” This policy acknowledges the Internet as a platform “for medical students and physicians to communicate and share information quickly and to reach millions of people easily.” It also takes note of the fact that this opportunity “can support physicians’ personal expression, enable individual physicians to have a professional presence online, foster collegiality and camaraderie within the profession, and provide opportunity to widely disseminate public health messages and other health communication. Social networks, blogs, and other forms of communication online also create new challenges to the patient-physician relationship.”

This AMA policy offers advice related to maintaining patient confidentiality, using appropriate privacy settings while accepting that all posted information should be considered open to public consumption, maintaining appropriate boundaries in the patient-physician relationship, and separating personal and professional online content. It also addresses the

issues of alerting authorities to unprofessional postings of colleagues who refuse the advice of other medical professionals to remove questionable content and the realization that their own online content may negatively influence their reputations among patients and colleagues, as well as impart consequences related to their medical careers, leading to the undermining of public trust in the medical profession.⁵⁵

Conclusions

Considering the paucity of published data related to the social media activities of our students, there is no evidence to determine how U.S. dental schools feel about the issues raised in this article. The widespread use of social media among our applicant and student populations and the impact this may have on our profession and our educational institutions are, however, strong motivators to initiate action. Social media are part of today's world, from which health care is not excluded. We need to investigate the usage patterns of our students through a rigorous research agenda and decide what action is required to ensure we continue to meet the professionalism expectations our patients demand in our implied social contract. Once these results are evaluated and thoroughly vetted, actions should be tailored to address our needs, minimize the threats, and maximize the opportunities that have already been noted by the medical profession. To help move dental education in these directions, we used the social networking service Delicious to prepare supplemental online resources enhancing the references with web-based material closely related to the topic. The supplement is at www.delicious.com/heikospallek/socialmediapolicy.

The available data in the medical community describing the hazards of unprofessional online activity support that a programmatic approach is needed, even as they suggest that this transition among at least some of our students will not develop automatically without our specific guidance. As the research data and collegial discourse flourish, outcomes may suggest alterations to existing CODA standards, as individual schools may develop their own plans in accordance with their vision, mission, and goal statements related to the social media activity of their students. Collaboration on an action plan, while maintaining proper emphasis on the doctor-patient relationship, with parent institutions may also be an avenue worth considering as an increasing number of universities develop comprehensive social media policies.

Once we feel we have adequately augmented our professionalism curricula, we may further decide it is necessary to develop national guidelines that outline our expectations for new members of our profession. These guidelines will purposely steer dental professionals through the process of transitioning from a private online user to a professional one who uses social media for public outreach to patients in his or her role as community leader and advocate for oral health. Regardless of input, albeit internal or external, a cadre of individuals who are willing to develop philosophy, policy, and procedure related to the use of social media in dental education can then be identified to evaluate the issues unique to the institution and perhaps the profession. Sharing this information in the peer-reviewed literature will benefit all involved and is imperative to moving the use of social media in dental education forward.

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