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Social Media in the Dental School Environment, Part B: Curricular Considerations

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Abstract: The goal of this article is to describe the broad curricular constructs surrounding teaching and learning about social media in dental education. This analysis takes into account timing, development, and assessment of the knowledge, skills, attitudes, and behaviors needed to effectively use social media tools as a contemporary dentist. Three developmental stages in a student's path to becoming a competent professional are described: from undergraduate to dental student, from the classroom and preclinical simulation laboratory to the clinical setting, and from dental student to licensed practitioner. Considerations for developing the dental curriculum and suggestions for effective instruction at each stage are offered. In all three stages in the future dentist's evolution, faculty members need to educate students about appropriate professional uses of social media. Faculty members should provide instruction on the beneficial aspects of this communication medium and help students recognize the potential pitfalls associated with its use. The authors provide guidelines for customizing instruction to complement each stage of development, recognizing that careful timing is not only important for optimal learning but can prevent inappropriate use of social media as students are introduced to novel situations.

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In this article, we expand on issues related to social media use and professionalism that were outlined in the companion article[1] and suggest best practices for faculty members who are introducing social media education into their schools' curricula. We hope to assist in the development of a comprehensive set of educational offerings on professionalism and social media issues to be integrated into the overall curriculum,[2] with a focus on ethical considerations related to societal changes triggered by the advent of social media.

Although the transition from student to professional is continuous, for the purpose of this article, three major transitions are defined: 1) from undergraduate to dental student; 2) from the classroom and preclinical simulation laboratory to the clinical setting; and 3) from dental student to licensed practitioner. For each of these stages, we explore dental education's role in teaching the appropriate professional use of social media, including modeling and articulating the aspects of which dental educators should be aware as well as what they should do in the wide domain of cyberspace. In these ways, we attempt to answer the call for development of "competencies in professionalism which must include instruction on the intersection of personal and professional identities."[3]

As explained in Part A of these paired articles,[1] Web 1.0 and 2.0 have had profound impacts on society, health care, education, dentistry, and dental education—the latter of which is the focus of this article. In the past, classroom time was dedicated to presenting information to students in a lecture format, in which learners are generally passive. Today, however, educational research has demonstrated that learning, including information transmission, is better

accomplished using methods that involve the learner. Engaging students in active rather than passive learning holds their attention, which helps develop critical thinking skills and may lead to better understanding and longer retention of the material.[4] This realization has encouraged some faculty members to organize class time differently from what they did in the past and to increase student involvement by including clinical cases, problem-based learning, standardized patient exercises, and "flipped classroom" strategies, in which students review material online prior to class and spend classroom time engaged in active learning strategies with concepts they learned about online.[5]

The addition of critical thinking exercises that engage students in active learning, with the instructor providing modeling, feedback, and time for reflection, promotes development of positive attitudes in the affective domain of learning. The proliferation of these alternatives to traditional lectures improves clinical instruction because many aspects of the dental curriculum cannot be delivered by simply having students access information on the Internet or read written publications. The development of effective communication skills with patients and the interpersonal interactions that inevitably accompany a student's new role as professional does not lend itself to either a lecture or a totally online delivery. However, once basic communication skills for working with patients have been developed, teaching students how to use social media tools is a communication enhancer that is imperative for a professional in the digital age.

Transition to Health Professions Student

The majority of currently enrolled dental students were born after 1980 and are thus considered members of the Millennial generation. In the near future, members of Generation Z, also known as "iGen" (born after 1998), will arrive at our schools. Most of these students are comfortable using a variety of social media channels. Indeed, many spend hours utilizing these channels to communicate 24/7 with their peers.[6,7] However much has been attributed to these "digital natives"[8] regarding their apparent comfort in acquiring knowledge and utilizing social media, this cohort should not be assumed to have technological competence or proficiency or even information fluency.[9]

Greene et al. argue that there are two critical aspects to acquiring true digital literacy: the ability to "effectively plan and monitor the efficacy of strategies used to search" for information, and the ability to "manage the wealth of information available online and possess the knowledge to appropriately vet and integrate those information sources."[10] Although Millennial dental students may have frequently used online resources in the past, they have likely not used those resources in a professional role. This is unfortunate because, in students' new role as aspiring health care providers, their often uncritical consumption of information can be risky.[9,11] As many of them struggle to find, understand, evaluate, and integrate information from the Internet,[12-15] dental educators need to help them fully develop integrated digital literacy skills. Guided use of social media can help students develop these skills by broadening their professional networks, easing access to information, and providing rapid communication between faculty and students, resulting in establishment of ad hoc learning communities. However, social media use is a double-edged sword: due to its reach and permanence, significant threats arise if students fail to use social media responsibly.

Students transitioning from undergraduate college to dental school thus require early instruction in managing relationships and boundaries with peers, faculty, and prospective patients. While familiar with the use of social media as a medium of mass communication,[16] students also need to understand how professional communication (online or face-to-face) differs from the social communication they have been using. For example, text messaging, which has become the leading form of adolescent peer communication[17,18] and may have shaped current students' communication skills,[18,19] is usually not appropriate for professional communication. Similarly, students need to be taught that errors in judgment committed in cyberspace can lead to permanent and potentially serious outcomes for a nascent health care professional. Becoming a digitally competent dental student requires respect for professional obligations, such as protecting patient privacy, that must be inculcated from students' first day of dental school.[20] This imperative is especially true now that earlier exposure to patients is becoming the norm.

What to Teach Students at This Level

When considering what students need to know as they enter dental school, we must recall that most

dental students are in the developmental period of young adulthood and are still establishing themselves as independent adults in society. As dental students, they have made a serious vocational choice, as evidenced by their dedication of considerable time and resources to professional education, and their newfound identity as dentists-in-training should be accompanied by a growing sense of commitment to the profession and its values. With this as a backdrop, being a medical professional, with its weighty social and professional responsibility, is a new experience for students.

Professional relationships are fiduciary interactions that are characterized as being patient-focused, having clear boundaries, and being guided by principles of autonomy and beneficence. The social contract that defines professional relationships is not clearly stated, and students often need to infer the rules and requirements dictated by this abstract sociological and ethical construct.[21] It is not surprising that students make more errors in judgment regarding social and professional boundaries when using social media than do faculty and staff given the difficulties in translating professionalism into behavior.[22]

Students' prior experience with social media may interfere with their appropriate use of these media in professional settings. It is plausible that students may mistakenly apply conventions and habits learned in earlier developmental stages to professional communication until they have learned the rules associated with their new role. In fact, it has been shown that faculty members, medical students, and the public each have different opinions regarding what is considered acceptable posting on social media[23] and what information belongs in the public sphere.[24] Thus, it is not surprising to hear reports of students "friending" their patients on Facebook and posting personal material to public digital sites.

One can choose not to actively participate in social media; however, totally opting out of the digital world is frequently not an option because personal information, such as public records or personal information posted by others, can accumulate online without an individual's consent.[25] While it is true that this type of information has always been publicly available, the amount of effort needed to collect it in the pre-computerized era made accessing such information impractical, so it was less likely to cause such problems as unintentionally violating a boundary or harming one's reputation. Students need to be instructed that, for example, unsolicited patient reviews posted on social media may affect their pa-

tients' perceptions of them as well as of the dental profession as a whole. Likewise, students should be advised that anonymity is not a reliable strategy for reputation management.

While teenagers have been educated about the harmful consequences of posting their contact information online,[26,27] dental students also need to consider that they now need to meet a higher standard and that personal material they publicize online, including postings from earlier periods of their lives, becomes part of what their patients and colleagues can easily view. This material may be inappropriate given their new role as a professional, so students need to examine their postings with this new cognitive filter. Dental faculty members must impress upon students that being a professional requires maintaining professional boundaries and that monitoring one's online profile is a skill a professional must acquire.[28]

Dental students also need to be mindful that their online behavior can shape public opinion about the dental profession and their schools, as they are de facto ambassadors of dentistry and their educational institutions. As such, improper online activity can result in ethical and legal problems that could derail an otherwise promising career.[29] This is an important warning because, in contrast to students' undergraduate institutions, health professions schools are more likely to hold students to higher behavioral standards, may enact stricter policies, and are more likely to act on ethical violations they discover. Students need to learn to view social media differently than they have in the past to avoid making unintentional errors that could result in academic sanctions.

With these considerations as a backdrop, the overarching goal of instruction in social media professionalism, also known as e-professionalism,[30] at this level should be to teach dental students how they can use social media to benefit their patients and the profession while maintaining the highest professional standards. The following topics should be included.[31]

Risk of misinterpretation. Face-to-face interactions benefit from the enhancements provided by our physical presence, nonverbal behavior, tone of voice, nature of the existing relationship, and the immediate feedback we receive.[32] In a face-to-face setting, a misinterpreted comment can immediately be corrected, and if something damaging or inappropriate is said, it affects only a limited number of people and a single setting. Most importantly, context has a large effect on message interpretation, and online postings are missing this critical filtering mechanism. This effect has been demonstrated

regarding email, in which misunderstandings occur due to the lack of context inherent in written as opposed to in-person communication.[33] In that study, users ascertained the intended tone of an email message only about 56% of the time, which is not much better than chance. Interestingly, those researchers also found that recipients believed they had correctly interpreted the tone of a message 90% of the time.

Permanence. Social media posts, and almost everything on the Internet, are permanent records that are impossible to erase.[20,34] This lasting record does not allow the sender to know who will read the message, when it will be read, or in what context the message will be perceived. This setting greatly increases the chances for miscommunication or relationship damage caused by an innocuous message. Thus, the teaching of e-professionalism needs to stress that it is not easy to remove information once it is posted online.[35] Even if a person is successful in purging information from one particular electronic repository, total removal of the information may be impossible because the data may have been permanently archived.[31,34,36]

Immediacy. Private information becomes and remains public the moment a message is posted, and this immediacy also presents a potential problem for professionals. The "scalability" of social media allows for the possibility that posts may instantaneously reach a large audience, sharing the message far beyond the intended audience.[37]

Perception. Interpretation of a message in a new context or slightly altered format that the sender cannot control can shift the intended interpretation from that in the original context. Subtle changes in context and format add to the danger of misinterpretation already inherent in electronic communication. Additional complications arise for professionals when messages are picked and rebroadcast to an unknown, wider audience, in which the author lacks the opportunity to clarify misconceptions. Some authors call this phenomenon "replicability," referring to the ease with which material can be copied and forwarded.[37] This phenomenon can create problems as far-ranging as providing inappropriate advice to strangers to violating copyright law.

Disinhibited self-disclosure. A computer screen may create an impression of what Shore et al. call "anonymity and invisibility" (p. 166), promoting greater disclosure than would likely occur if the student were face-to-face with the message's recipient.[20]

Dental students need to be reminded that online communication fosters this type of "disinhibition."[18,38,39] This is of particular importance for our young adult students because studies have found that adolescents who do not participate in online self-disclosure risk social isolation from their peers, even when they are not particularly comfortable posting sensitive information online.[31,40] For many young people, the social rewards of sharing personal information online outweigh the perceived risks to their privacy because the desire to fit in is so strong.[27,41] Given that college students used social media during their adolescence, it is likely they have felt pressure to publicly disclose personal information in their immediate past. As students enter dental school, they need to be encouraged to reexamine the decision to post sensitive information in light of their new role as health care professionals.

Searchability. This term refers to the ease of finding information as electronic search engines become more powerful.[37] Students need to be taught that the possibility of a message staying hidden and remaining anonymous is small, given sufficient effort by a determined searcher. Moreover, even if the offending information cannot be directly linked to the student, if it is attributed to a dental professional, it has the potential to harm the public's perception of the profession. A professional—who should be committed to nonmaleficence and a desire to maintain the public's trust in the profession—is responsible for making sure such damage does not occur.

Loss of context. Sharing information out of context can also present problems for professionals.[20] For example, when health care professionals vent online about the difficulties associated with patient care,[42,43] it can be misinterpreted by outsiders who are not a part of the situation surrounding the complaints. When done privately, these interactions between coworkers may be an attempt to cope with the difficulties associated with working with difficult patients.[20] However, when shared out of context on social media, they can be harmful to patients; they may damage the reputation of the professional who made the post and his or her practice; and, ultimately, they may hurt the entire profession.

Professional advice in public. Dental students need to be taught that professional health advice is personal and should be offered only as part of a doctor-patient relationship. Offering specific advice that is not personalized has the potential to harm both the patient and the provider who offers the advice.

At its worst, a social media posting might be interpreted as providing care on the Internet outside of one's licensure jurisdiction, resulting in violation of a state's licensing laws.

Negative feedback and libel. Criticism delivered face-to-face to another health care provider may make for an unpleasant interaction, but if the same message is posted on a public social media site, it could harm the recipient's reputation and, depending on the strength and wording of the message, may be interpreted as libel. Libel, a form of defamation, is an untrue statement presented as fact that the speaker knows to be untrue, is published in the public arena, and is intended to be believed as true by those who read the statement. In addition, the statement causes harm to the reputation of the person about whom the statement was made.[44] In general, sensitive conversations, especially those involving negative feedback and criticism, are best done in face-to-face settings.

Regulatory framework. In the area of jurisprudence, students need to learn the laws and regulations that set firm limits on social media behavior and communication. Medical records laws, patient confidentiality, and privacy regulations at the state and federal levels dictate clear boundaries with respect to online behavior (e.g., does state law allow health care providers to contact a patient via email to confirm an appointment?). Studying ethics codes will also provide direction as to what the public expects from the profession and, by extension, from dental students.[45] Codes of ethics can help students reflect on the dialogue between the public and the profession, allowing them to apply these guidelines to develop internal professional norms for appropriate online behavior.[21,45] In general, instruction in the form of case-based discussion is often needed to introduce the student not only to the context and scope of various codes but to their application.

While there are ways to limit public exposure and enhance a professional's privacy (such as using strict privacy settings), a technical approach should not be the primary strategy for helping dental students develop their new professional responsibilities. While proficiency with using privacy settings can be useful, it is more important to teach students about the tenets of professionalism, the fiduciary qualities of professional relationships, and the importance of establishing boundaries in professional relationships than it is to enhance their technical skills as digital information users. Resources for teaching the core principles of media literacy are available from the National Association for Media Literacy Education.[46]

How to Teach Students at This Level

Dental faculty members understand their pressing responsibility to assist new dental students in the transition from the college experience to health professions school. Many schools hold white coat ceremonies to welcome students into the profession and impress upon them the serious responsibilities the white coat symbolizes. Others require students to pledge a dental oath at the beginning of their dental education.[47] These experiences provide a backdrop for social media education, but there are barriers to instruction even at the beginning of the student's dental education.

Preparing students for professional online behavior is difficult because of the generational differences between faculty and students, and there is often little consensus between the two cohorts as to what constitutes inappropriate behavior[48]—especially in the gray zones between personal and professional communication. School or university policies may be too broad and/or vague to be helpful or may not exist at all, and these guidelines often fail to provide faculty and staff with adequate guidance.[49]

Similarly, today's media-literate students want new forms of pedagogy. They are often unaccustomed to learning sequentially or to "reading the manual," but instead are inclined to learn through participation and experimentation.[24,50] Thus, acquainting them with the pertinent policies and procedures and then quizzing them on the facts disarticulated from hypothetical situations that apply those facts may not result in the desired learning outcomes. Moreover, becoming a professional extends beyond acquiring knowledge and skills, but also involves cultivating proper professional behaviors and attitudes. These competencies are not easily learned through didactic exercises alone.

It is not an easy task to instill in our students the notion that the responsibility to treat patients in an ethical manner is one of the cornerstones of the profession and that dentists are held to high standards of conduct as embodied in the American Dental Association (ADA) Principles of Ethics and Code of Professional Conduct. According to Stern and Papadakis, teaching such professional values consists of three basic actions: setting expectations, providing experiences, and evaluating outcomes.[51] Traditionally, these values can be observed by students in the clinic, where faculty members serve as role models. In the digital world, students generally cannot observe faculty behavior, in part because of

differences in the prevalence of social media use between faculty and students, the former having far less experience with and predilection for social media. In 2013, for example, 37% of dental faculty respondents reported they did not use social media.[52]

Despite current dental students' preference for active learning activities, instruction in this area must be approached carefully. Because of the far-reaching impact of social media, an error in judgment can easily result in negative outcomes, which could include harm to the school's reputation. Serious errors could lead to legal repercussions and, in extreme cases, a student's dismissal from school. Given the broad reach of the Internet, the stakes are simply too high to allow for exploratory learning. Thus, Stern and Papadakis's directive that "educators must design clinical experiences that allow students to see how seasoned practitioners negotiate the dilemmas of medical practice"[51] appears to be a distant goal with respect to structured curricular content in current dental school offerings.

Since faculty familiarity with social media issues varies, targeted faculty development efforts can help to bridge the generation gap by providing inexperienced faculty members with basic social media literacy, such as awareness of its capabilities, vernacular, and abbreviations; demonstrating use of social media tools; and helping them develop an understanding of the responsible use of these modalities. Faculty members are experienced in modeling the professional role, and this information will help them guide students as questions come up in lecture and clinic. Importantly, these social media competencies need to be integrated into the traditional paradigm for teaching professionalism that already includes case studies, role plays, and role-modeling of professional behavior by faculty.[53]

Effective teaching activities may include having new dental students analyze their own social media profiles. Students could also analyze fictitious posts that could be perceived as unprofessional, such as communications that include inappropriate photos or the use of improper language. Medico-legal issues could be addressed realistically by critically analyzing the social media participation of simulated dental students' Facebook profiles. Photos depicting alcohol consumption and other questionable activities, posts critical of peers, faculty, and courses, and online submissions that disclose patient information could be reviewed and discussed. Thoughtful discussions would encourage students to reflect on their own online reputations and the repercussions of question-

able social media activities for themselves as well as their chosen profession.[48,54] Actual social media violations could serve as cautionary tales, such as the Dalhousie University dental school "Gentlemen's Club" Facebook page, which contained misogynistic references to fellow students.[55,56]

In the preclinical years, the faculty need to provide students with interdisciplinary instructions that help them develop foundational skills in the areas of informatics, communication, patient management, ethics, professionalism, and legal and regulatory issues to help them manage the appropriate use of social media in their professional and personal lives. Instructions should include activities that help students build their identification with the profession and instill the obligations of the professional role. Taking part in white coat ceremonies, understanding honor codes, participating in activities of organizations like the Student Professionalism and Ethics Organization, and reasoning through ethics cases appropriate for their experiences in school can all contribute to development of the knowledge base students need to evaluate the impact of social media tools. A student's identification with the profession is enhanced by these activities, and increased ownership of the professional role should facilitate adoption of the profession's aspirational goals.

Other avenues for developing appropriate social media communication skills can be found in the behavioral sciences curriculum. This instruction teaches students about models of dentist-patient relationships and basic communication skills for developing patient rapport and exposes students to principles of communication theory. This education is critical for understanding the nature of communication, for evaluating the appropriateness of interactions with patients, and for helping students as new professionals recognize the limitations of online communication for discussing sensitive topics. A broader conceptualization of the patient-dentist relationship, including exposure to various models, can help students appreciate the need for maintaining appropriate boundaries with patients, both in and out of the clinic.

Faculty members may have social media experience very different from that of students, and it is natural for students to question faculty instruction on this topic.[53] A proscriptive approach is likely to be unsuccessful because students may feel that the faculty do not have sufficient expertise in this arena to help them and that their own ability to negotiate the social media world is adequate for

their communication needs. Students who have used social media for many years may feel that studying social media communication skills is not relevant to their dental education and does not need to be addressed in an educational setting. This tendency to discount the need for structured learning in an area in which students believe they have the upper hand over faculty showcases the notion of unconscious incompetence.[57]

Students' common belief that they do not need faculty instruction regarding social media is in stark contrast to the finding in one study that 70% of medical students' profiles had photographs with the students consuming varying amounts of alcohol.[3] Similarly, Chretien et al., in their survey of medical schools, reported that "the majority of medical school representatives reported incidents involving student posting of unprofessional content online."[58] There is no reason to believe that dental students are significantly different from medical students when it comes to these findings. Moreover, Taylor et al. noted that, with regard to social media use by psychology students, those "with the least amount of professional experience will be facing some of the most complex situations regarding the distinction between professional and private information" (p. 157).[53] Despite student attitudes, these findings suggest a need for greater guidance and education for dental students in this area.

Engaging students in a dialogue that addresses their social media concerns is likely to be better received than giving them rules and directives disconnected from their experiences in school and in the clinic. This dialogue should be part of a series of integrated themes designed to help students consider their use of these tools. Teaching factual information with case discussions is likely to be the most effective way to have students begin to understand the inherent challenges in the use of social media for professional communication. Student receptivity is likely to be enhanced, for example, by use of scenarios that help students to identify and problem-solve about salient issues (see examples in Table 1). The preclinical curriculum should generate some caution about using social media with patients. At this point, students will not have all of the answers, but they should be able to recognize that there are important questions they need to ask themselves whenever they use social media for communication in their professional role.

How to Assess Students at This Level

As with other foundational knowledge, short essay and multiple-choice examinations are a proven way to ensure that students are familiar with relevant laws and regulations. Fictitious cases can be used to determine if students are able to identify potentially problematic behavior related to social media use and if they can select and apply appropriate professional norms so as to achieve desired outcomes. In behavioral sciences courses, social media competence could be integrated into standardized patient examinations and objective structured clinical examinations (OSCEs).

Transition to the Clinical Setting

A special event in all health care professionals' lives is the day they treat their first patient. Teaching techniques for social media need to honor this transition by moving from instruction in foundational knowledge in areas that support the responsible use of digital communication to applied, clinically related applications with material from the areas of ethics and professionalism.

Table 1. Examples of scenarios that help students to identify and problem-solve about social media issues

1. A patient who is a marketing professional wants to invite you to dinner. Do you go? The same patient wants to follow you on Twitter, sends a friend request on Facebook, and asks for your endorsement on LinkedIn. Which requests would you grant, if any, and why?

2. Why is it hard to convey sarcasm using email? Why might this be a problem for health care communication? What message is sent when one types in capital letters online? Why is this the case?

3. Mary saw a picture of her dentist chewing tobacco on a Facebook page and asked the dentist about it during their discussion of her own tobacco use habits. Has the dentist done anything wrong?

4. Some members of a D1 class have an exclusive webpage where they share information about class-related issues, such as class notes, tips from former students, and old released exam questions. Although all of the materials that are on the site are believed by the students to be authorized for posting and potentially accessible by any student, not all class members have access to this page. Is there a problem with this practice?

What to Teach Students at This Level

First and foremost, students need to view social media as an adjunct to effective communication and marketing that cannot replace the development of authentic, trusting relationships created through face-to-face interactions. Communication and behavior management courses address the often lamented loss of narrative capacity and might reverse the hypothesized physiological and anatomical brain changes associated with excessive Internet use.[59] Understanding the hierarchy of communication tools, as well as which tool is appropriate in a given situation, is critical to becoming a successful dentist. Face-to-face conversation, descriptive narrative in written format, telephone communication, email, and social media all have their places in this hierarchy, and sometimes, more than one form is needed to make certain messages are completely understood and reinforced. For example, students need to understand that informed consent should always occur verbally, as well as in written form, for complex or high-risk treatments. Legal disputes are best handled exclusively in writing, whereas motivational social media prompts about home care or tobacco cessation can be sent to consenting patients. Crafting effective messages that are educational, motivational, or reassuring is an art, which is why there are bodies of scholarship in marketing communications. Students need to learn the nuances of effective broadcast messages used on social media sites so that such communication is both accurate and effective.

Another important concept for students to learn is that one cannot protect what he or she is willing to give away.[1,60] One's professional reputation is not only to be protected but enhanced. It is important that all broadcast communication be well considered and planned before posting occurs. Students need to learn the legal ramifications if social media postings are not based on evidence and/or promise outcomes that cannot routinely be delivered. Such postings might be interpreted by patients and their attorneys as "guarantees" or "warranties," resulting in litigation when the desired outcome is not achieved.

On a more technical level, this stage is the time to instruct students how to deploy privacy settings to safeguard their own and their patients' personal information.[20] Students might be hesitant to embrace these tools as public disclosure of information appears to be one of the central motivations for using social media.[40] Students are usually well aware of legal privacy rights, such as those guaranteed by HIPAA.[61]

It is the task of clinical educators to help students understand that serial bits of information preserved in an electronic correspondence can produce the same result as a breach by means of a patient health record release. Students' understanding of the reasons for maintaining boundaries (which they were exposed to earlier) should facilitate their use of these procedures.

Students also need to learn that initial disclosure of personal health information by a patient does not lessen the dentist's responsibility to refrain from compounding its release. Maintaining an appropriate professional relationship with a patient becomes more difficult when close friendships are involved. It takes special effort to compartmentalize the personal from the professional relationship at the times when each is in play. Students should be advised to develop a "dual-citizenship" approach that isolates personal from professional content.[20] Such an approach allows dentists to use networks for professional connections while maintaining their personal privacy.[62]

Dental educators can provide simple rules that help students analyze their social media postings before broadcasting them to the world; one such acronym is "PRIP" (Table 2).[63] Students should also be taught to monitor their own online presence[28,62] because content, such as photographs with their image, might be posted without their consent or knowledge. Services such as Google Alert can be utilized to notify users when information related to them is posted online. When blatantly false information is published, the best reaction is publication of true information addressing the falsehood. In extreme situations, in which bona fide defamation or damage to professional reputation can be demonstrated, monetary remedies may be possible. However, students should be aware that proof of such tortious activity is extremely difficult to establish because one must demonstrate intent, and legal representation is costly.[64] Monitoring their online presence allows students to be aware of information that their patients may have learned and helps them be prepared to address it if necessary.[53]

Students should also be cautioned against posting material when in an angry or agitated state of mind. Thinking before posting is critical to prevent lapses in judgment resulting in false or inflammatory postings. The familiar advice to use as a barometer of appropriate behavior or communication (and one that dispels the illusion that only one person is viewing your message) is "think how this would play out if it were on the front page of a major newspaper." Asking a trusted mentor or friend to review drafts of

Table 2. PRIP acronym to help students analyze their social media postings before broadcast

Privacy:	Have you removed patient identifiers?
Respect:	Does your communication reflect respect for the patient under discussion?
Intent:	What's the intent of using the case or illustration?
Perception:	How will the discussion be perceived?

Source: Vartabedian B. Digital smarts: a common sense primer for interns. 33 Charts. At: http://33charts.com/2012/06/digital-smarts-common-sense-primer-for-interns.html. Accessed 5 Feb. 2015.

posts might help prevent publicizing lapses in judgment.[34] Other topics suggested as part of educational programs are related to the importance of projecting an online persona that is characteristic of a young professional.[2,65]

How to Teach Students at This Level

While the examples of professionalism regarding patient care in the earlier stage were hypothetical, students at this clinical stage have their own patients and personal experiences. Classroom activities can draw on these experiences for group discussions, including them in ethics cases and examining them when considering patient management issues. Students' experiences with new procedures, anxiety about treating patients, and concern with mastering the details of clinical protocols reflect their growing sense of professionalism. The goal of educational activities at this level is integrating this growing awareness of identity with the professional needs and challenges of communicating via social media and other electronic communication channels.

Discussing the clinic's policy regarding online communication with patients, focusing on the rationale for the policy and reasons for certain restrictions, can trigger critical reflections about various aspects of e-professionalism. As students cannot directly observe their instructors' online behaviors, analyzing and discussing policies that guided behavior in actual cases are particularly important.

While role modeling is considered to be one of the key ways of teaching professionalism, some dental faculty members may not use social media and therefore lack understanding of the way in which a "digital identity is . . . an integral part of how young professionals live and connect with colleagues."[66] For our dental students, as for other young professionals, refraining from using social media and other electronic communication channels is not a "palatable option."[66] Encouraging ethical thinking in dental students requires discussing the societal changes that have occurred with the advent of social media and examining how these changes affect the relationship between dentists and their patients. Ethical thinking "involves taking the perspective of others, awareness of one's roles and responsibilities in the online communities in which one participates, and reflection about the more global harms or benefits of one's actions to communities at large."[37] Faculty members have the responsibility to help dental students become aware of the perspectives of others so as to be respectful users of social media, and none of this can be achieved without targeted faculty development efforts.

How to Assess Students at This Level

Assessment should examine students' responses in situations they encounter in the clinic. To honor the privacy and confidentiality of individuals involved, such examples should be based on de-identified or virtual cases, or they should be discussed privately by the student and supervisor when social media-related issues occur. Students need to demonstrate the ability to identify and articulate issues and to problem-solve when asked to address social media infractions. Students can be asked to demonstrate the appropriate use of social media tools in the clinic as part of their personal educational portfolio. To assess the development of positive professional attitudes that support responsible social media use, journals, logs, and peer feedback can be useful educational tools. These attitudes are often revealed in group discussions and can also be addressed in these settings.

Transition from Education to Practice

Among the competencies dental schools and allied dental education programs expect of their graduates are the understanding of such terms as "professionalism" and "respect," along with knowl-

edge of regulatory and legal obligations and ethical decision making. Similar obligations are outlined in the Commission on Dental Accreditation (CODA) standards for predoctoral, dental hygiene, and graduate dental students.[67] An underlying theme in individual program competencies and CODA standards is the development of an ethical and competent provider who is knowledgeable and skilled in managing and serving a diverse population of patients in an employment situation in which oral health services are provided. Functioning in this role requires excellent communication skills, an ability to see things from the patient's perspective, and an understanding of the professional role and the obligations it entails.

What to Teach Students at This Level

Dental students need to be reminded from the time they enter dental school to keep looking ahead, beyond graduation. Students must be cautioned that what they do today, if posted on social media, may harm their career and professional aspirations in the future. Employers frequently seek information about prospective associates using social media profiles,[68-70] and if the information is negative, applicants may weaken their candidacy for a graduate program position or employment opportunity. An analogy for this situation is an irreversible procedure in dentistry. Once an irreversible procedure is complete, the provider cannot return the tooth or tissue to its original condition. Similarly, something posted on social media cannot be repaired or called back and made to disappear. Student skits that seem humorous at the time but cross professional boundaries could easily find their way to YouTube, for example, and follow a student into practice.

Dental educators should remember that students are not involved in the day-to-day management of a dental school or its electronic communication safeguards. Therefore, it is important to teach graduating students that, as practitioners, data security is their responsibility, is critical to the protection of patient autonomy and confidentiality, and must be a priority whether the provider is an employee or owns a practice. Record keeping, confidentiality and security, and sharing of protected health information all require attention, so safeguards must be applied to written, verbal, and electronic communication. Individual states may have specific guidelines about disclosure of patient information of which all providers must be aware. Students need to pay attention to the services that occur behind the scenes at the dental school and tap into the expertise available because they will be responsible for supervising, monitoring, or providing these services when they practice independently.

Dental school graduates should be able to develop policies for their private practices outlining expectations for their team members because their posts will be invariably associated with the entire practice, regardless of the owner's awareness or sanctioning. Such policies must be comprised of clear guidelines about interactions with patients and colleagues that apply in the work environment as well as outside the dental office. Providers should not allow themselves, or their team members, to compromise a professional relationship by shifting the relationship to a personal one. Instead, all dental team members must be aware of the importance of maintaining professional boundaries, and they must recognize and respect these boundaries at all times[20] to maintain the trust that is the foundation of a professional relationship. The ADA has resources that can assist a dentist in developing policies.[71]

As an example, dental school graduates need to understand that "Googling" a patient is not acceptable[72] because of their professional obligations to patient privacy. Providers have access to their patients' confidential information, but knowing a patient's health history does not permit them to violate that individual's privacy for the sake of curiosity. This may seem counterintuitive to frequent social media users. Why not access information when it is easily obtained, they may ask, and was likely freely posted to the Internet? It is the role of dental educators to help students understand that accessing information about patients without a treatment-related reason violates a professional boundary and the patient's privacy. Such a search introduces other problems. As all patient-provider communication becomes part of the patient's health record, how would information about an individual patient that was discovered online but not disclosed during the patient interview be treated? Bosslet has argued that informed consent is necessary for online searches, just as it would be for disclosure of any other health care information.[73] Jent et al. point out that patient autonomy requires respecting the patient's privacy and asking permission before collecting information that could lead to the provider having information that was obtained without permission.[72] Information collected without the patient's consent, they argue, could lead to an ethical dilemma if this information has an influence

on future treatment. Dental students therefore need to realize that something as simple as an Internet search must be viewed differently when done in a professional role.

Similarly, patients can discover information about their provider that can lead to boundary violations. For example, when a patient discovers via social media that dental team members have conducted themselves inappropriately, the professional relationship can be compromised. Extraneous information about the provider can also cause subtle changes that distort the professional relationship: beyond shifting the focus of attention to the provider, some information may make the patient-dentist relationship seem more like a friendship than a patient-provider team, and negative feelings about what is uncovered may interfere with how the patient feels about the treatment and the provider.[53,66] Thus, providers need to be advised about strictly maintaining professional boundaries by not posting information that could be misinterpreted or invite further boundary violations by patients. This is an especially challenging area for students.[2,74,75]

Because patients may feel very comfortable asking a provider a question online rather than waiting for the next appointment, we need to teach graduating students how to respond to such inquiries and consider their personal policy about how such inquiries will be handled in their future practice. Students need to understand that to protect the patient and clearly understand the patient's need, the best response is to take the conversation offline, offering a phone call to answer the question and documenting the specific advice that was given in the patient's chart. One can justify the call by indicating the discussion should not be a public dialogue. An advantage to this strategy is that it may strengthen the relationship by offering the patient individual attention.

Conflict of interest can also be a concern. A provider advocating for a product or service in which there is a business interest or opportunity for financial gain must be transparent in all communication—including when advocating the use of social media. In accordance with the federal Sunshine Act,[76,77] the Centers for Medicare and Medicaid Services (CMS) publicly discloses payments and "other transfers of value" by pharmaceutical, device, biotech, and medical supply companies to physicians, dentists, and teaching hospitals. Patients who discover undisclosed conflicts of interest may lose trust in their dentists,

and students need to understand the professional issues that are raised in these transactions.

Social media also have a place in practice management courses. As employers, practitioners may be interested in finding out more information about their staff members. If information about employees is monitored, it should be clear to the staff that those practices occur. In addition, the same protections that employees receive under federal and state guidelines apply if social media are used to make a decision about an employment status. Thus, if employment is terminated and it is determined that the termination was a discriminatory action or based on a protected condition because of something disclosed online, the employer may be subject to allegations of unlawful discrimination.

Future practitioners also need to understand that patients will provide their comments and criticisms about dental providers online. Ratings on consumer sites can be both helpful and detrimental to a dental office or the provider's reputation. In some instances, negative comments can impact a patient's decision to remain as a patient in an office. It is imperative that dentists manage their digital footprint and regularly monitor online content;[28] however, the value of monitoring services is considered questionable given the difficulty in retracting or removing a false negative review. This is true if the material posted is clearly erroneous or intentionally inflammatory.[78] Filing a lawsuit will most likely not result in restitution for damages caused unless the action gives rise to the level of libel, which is a high legal standard. There are statutes in some states that prevent people and companies from filing lawsuits to silence a critic, and HIPAA might make a rebuttal illegal.[79]

The problems inherent in posting clinical cases/patient videos to social media sites with unprofessional comments should be reinforced. Many professional societies and study groups are setting up forums to share ideas and discuss clinical cases. Although the information in these sites may be useful, participants should be aware that opinions expressed may not be evidence-based. In addition, information posted in these forums can be shared elsewhere and may have some downside if attached to a dentist's name.

How to Teach Students at This Level

As students prepare to leave dental school, they are more confident, have more experiences to reflect on, and find their thoughts turning toward whether

they will seek further training, how they will obtain the necessary credentialing to practice independently, and how to select the practice environment in which they wish to work. Students have moved from having ideas about how professionals should use social media tools, to supervised use of these tools in the training clinic, to needing to know how to use these tools for themselves in a competitive environment. In keeping with this stage of their development, students need to be motivated to learn more about social media use based on its impact on their practice. Students should now fully identify with their professional role and should have an increased awareness of their obligations to the profession they are entering. Since technology changes quickly, students should have learned the skills that allow them to effectively use new technologies as they develop and know the important questions to ask when encountering new challenges in the future. For students at this level, providing real-life examples that allow for discussion and provide guidance for later use in private practice will motivate them as they approach graduation. Such examples need to include professional lapses and what lessons can be learned from them. Discussion with mentors, peer leaders, and supervisors should be encouraged.

How to Assess Students at This Level

At graduation, classmates become professional colleagues and fellow practitioners in the community. Peer review is the mechanism the profession uses to regulate a practitioner's behavior, so mimicking this behavior to help assess higher level judgments about social media seems appropriate. To do this, simulations that present students with the types of challenges they are likely to encounter in practice can be used, followed by feedback from faculty and peers on senior students' reactions to these problems.

Similarly, professionals have an obligation to self-regulate and provide feedback to other professionals about their behavior. One way to demonstrate this behavior and increase the saliency and depth of students' understanding of these principles is to involve graduating students in instructing students in the first three years in the use of social media tools and the principles that guide their use. Students can serve as group leaders, present cases to more junior students, and deepen their own understanding of these concepts through these activities.

Conclusion

As our traditional standards of what is public and what is private no longer apply in a digital environment, the question is how this "social-cultural game changer"[80] impacts dental practice and the patient-provider relationship. Dental education is part of the fabric of society, and as members of the dental profession, educators are responsible for providing guidance for the use of social media to faculty and students. This is true regardless of whether social media are currently being used by faculty because this form of communication is an accepted medium by current dental students, because its misuse can have deleterious effects, and because there is empirical evidence that students need additional instruction in using social media. In addition, dental curricula must respond to changes in the practice environment and anticipate what students will need to function effectively as independent practitioners in coming decades. Social media will certainly be a part of their future and will likely evolve and change over time, so educators must provide guidance not only for its safe and effective use today, but also impart an overarching understanding of the nature of these media and the problems they can present. This broader understanding will allow students to effectively use these tools in the future. To address this need, this article has sought to describe the complexities associated with social media and offered practical suggestions for its incorporation into dental curricula. Future work should establish the efficacy of these proposed curriculum additions.

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