

The Intersection of Online Social Networking with Medical Professionalism

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AIM: To measure the frequency and content of online social networking among medical students and residents.

METHODS: Using the online network Facebook, we evaluated online profiles of all medical students ($n=501$) and residents ($n=312$) at the University of Florida, Gainesville. Objective measures included the existence of a profile, whether it was made private, and any personally identifiable information. Subjective outcomes included photographic content, affiliated social groups, and personal information not generally disclosed in a doctor-patient encounter.

RESULTS: Social networking with Facebook is common among medical trainees, with 44.5% having an account. Medical students used it frequently (64.3%) and residents less frequently (12.8%, $p<.0001$). The majority of accounts (83.3%) listed at least 1 form of personally identifiable information, only a third (37.5%) were made private, and some accounts displayed potentially unprofessional material. There was a significant decline in utilization of Facebook as trainees approached medical or residency graduation (first year as referent, years 3 and 4, $p<.05$).

DISCUSSION: While social networking in medical trainees is common in the current culture of emerging professionals, a majority of users allow anyone to view their profile. With a significant proportion having subjectively inappropriate content, ACGME competencies in professionalism must include instruction on the intersection of personal and professional identities.

KEY WORDS: medical education; professionalism; internet; social networking.

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lining diverse domains such as compassion, responsiveness to patient needs that supersedes self-interest, respect for patient privacy, and sensitivity to diverse patient populations.¹ While professionalism is hard to objectively measure and difficult to teach, there has been progress in areas like patient confidentiality (e.g., the Health Insurance Portability and Accountability Act), communication skills, interactions with pharmaceutical companies, law and ethics.²⁻¹² However, despite extensive research and debate, it remains difficult to define or measure the domain that the ACGME calls the “professional accountability to society.”^{1,10,13-16}

Further, in this age of Internet communication, the identity of being a “professional” is expanding, inadvertently blurring the interface between work and personal time. Social networking websites such as Facebook¹⁷ are popular among young pre-professionals, and allow medical students and residents to communicate and share information with peers via personalized online profiles. These self-created profiles may list personal information such as address or phone number, and may include information such as sexual orientation and political views. Unfortunately, medical students, with their sense of medical professionalism just beginning to develop, and residents, as professionals still in training, may not understand that their publicly available content directly reflects their professionalism. Unknowingly, medical educators, colleagues, future employers, and even patients may have access to their content online.

A recent study of how prospective teachers use Facebook suggests that unprofessional uses of social networking tools are commonplace.¹⁸ To our knowledge, there have been no studies of pre-professionals in medical school or residency and their use of Internet networks. This study aims to determine how medical students and residents are using Facebook and provides a context within which medical educators can begin to consider the ramifications of the digital world on the ACGME professionalism competency.

INTRODUCTION

An important aspect of becoming a physician is learning and incorporating high standards of medical professionalism. The Accreditation Council for Graduate Medical Education (ACGME) counts professionalism as a core competency, out-

METHODS

This study considered eligible all medical students ($n=501$) enrolled at the University of Florida, Gainesville and the associated medical residents with available full names ($n=312$) employed by the Shands Hospital. Study authors (J.C., E. B., J.B.) used personally created Facebook registrations to search for the study subjects' online profiles. Facebook, unlike

other networks such as MySpace, is publicly available to any registered student, faculty, or employee at a particular university and can be searched using any first or last name. The Institutional Review Board at the University of Florida permitted this study as an exempt project.

We determined whether each student or resident had a Facebook account and whether that account was “private” or “public,” a designation that the user can employ to limit some of the site’s content (although field of study, a personal photograph, and a home address could still be viewed in all accounts). For public accounts, we recorded objective information in the following domains: personal information, including address, the presence of a screenshot, email address, additional addresses, phone number, and Instant Messenger address. Other information included field of study, political views, sexual orientation, and relationship status. We also collected the number of “friends” they had, meaning the number of people the student or resident accepts into his/her network, the number of photo albums, and the number and types of social groups they joined. Individual characteristics traditionally used in research, such as age and race/ethnicity, could not be recorded unless the study subjects explicitly said this.

We also qualitatively examined the content of the profiles. Using a random number generator, we performed in-depth qualitative content analyses of ten medical students to characterize possible unprofessional material. “Unprofessional” material was subjectively defined as any that could be interpreted to illustrate substance abuse, sexism, racism, or lack of respect to patients.

Analyses were performed using SPSS, version 14 (Chicago, IL) and we accepted a level of significance of $p < .05$ using a Student’s *t* test for comparison.

RESULTS

Description of Facebook Users

We describe all students and residents in Table 1. Overall, 362 of the 813 participants in this study (44.5%) had a Facebook

Table 1. Description of Students and Residents with Facebook Accounts

	Total (n=363)	Medical Students (n=322)	Residents (n=40)
Gender (% female)	47.2%	50.6% [†]	20.0% [†]
Year in training: (medical school years 1-4; residency years 1-6)			
First year	–	28.0% [‡]	30.0% [‡]
Second year	–	28.5% [‡]	30.0% [‡]
Third year	–	23.4%	25.0%
Fourth year	–	20.1% [‡]	10.0% [‡]
Fifth year (Residents only)	n/a	n/a	5.0% [‡]
Sixth year (Residents only)	n/a	n/a	0.0%

*Residency types with available names of residents at the University of Florida include Emergency, Family Practice, Internal Medicine, Neurology, Neurosurgery, Obstetric/Gynecology, Pathology, Pediatrics, Psychiatry, Radiation Oncology, and General Surgery.

[†]Comparison between Medical Students and Residents, p value=.04

[‡]Comparison between Students and Residents as they approach graduation, all $p < .05$

Table 2. Description of Viewable Facebook Information

	Total n=362	Medical Students n=322	Residents n=40
Personal Information			
Field of study	79.6%	82.0%	60.0%
Personal photograph	77.9%	80.1%	60.0%
Home postal address	6.1%	5.9%	7.5%
Area of residence	31.7%	32.5%	25.9%
Email address	83.3%	88.0%	48.1%
Instant Messenger Address	41.4%	44.0%	22.2%
Phone number	7.5%	6.5%	14.8%
Personal Views			
Sexual Orientation	52.4%	51.5%	59.3%
Relationship Status	58.6%	59.0%	55.6%
Political Perspectives	50.2%	51.5%	40.7%
Social Networking			
Mean # “Friends” (range, SE)	126.0 (0-999; 9.9)	140.8* (0-999; 10.8)	24.0* (0-195; 7.8)
Mean # Photo albums (range, SE)	2.2 (0-16; 0.2)	2.3 (0-16; 0.2)	1.1 (0-16; 0.6)
Mean # Social Groups (range, SE)	11.2* (0-125; 1)	12.2* (0-125; 1.1)	3.3* (0-23; 1.0)
Facebook Accounts made private (% Yes)	37.5%	37.9%	32.5%

*Comparison between Medical Students and Residents, all p values < .01

account, although only 12.8% of residents did compare to 64.3% of medical students, ($p < .0001$). Almost two thirds (62.7%) of all participants kept their Facebook account public, (students 62.1%, residents 67.5%, $p = .51$). Facebook use declined as medical students and residents approached graduation. Both groups frequently listed personal information, even if their account was private, like field of study (80.0%), a screenshot (77.9%), or home address (6.1%, Table 2). Medical students had significantly more friends and joined more groups than residents. While only 14.7% of all residents had accounts, there was a large range of use according to subspecialty training (radiation oncology 0%; psychiatry 22.7%). There was no variation in use by medical versus surgical subspecialties (15.9% versus 10.8%, $p = .32$).

Qualitative Analysis of Publicly Available Facebook Accounts

A large proportion of medical students ($n = 200$) and of the residents ($n = 27$) joined online groups. While the majority of groups were seemingly benign (e.g., “Class of UF 2008”), or supportive (e.g., Supporting Virginia Tech), a small proportion of the public accounts included foul language (e.g., “PIMP,” aka “Party of important male physicians,” or “Keep your f***ing hand down in lecture and shut the f*** up”), sexist comments (“Physicians looking for trophy wives in training”), or racially charged (e.g., “I should have gone to a blacker college”). The underlying rationale for these groups could not be determined.

Looking in-depth at a random subset of students, ($n = 10$), we noted that a majority (90%) used their profiles extensively.

Many used the site to access friends and family, with prominent wedding and newborn photographs. However, others had content that could be interpreted negatively. For example, 70% had photographs with alcohol, with a frequency of 10–50% of photographs with some excess drinking implied. Further, 3 profiles had unprofessional content readily available, such as drunkenness, overt sexuality, foul language, and patient privacy violations in non-U.S. locations.

DISCUSSION

This study reveals that medical students and residents frequently use Facebook as a social network. Use is more common among students, and most chose to keep their profiles open to the public. Further, personal information is readily available, and many include information that is not usually disclosed in a doctor–patient relationship. Education in professionalism needs to address these activities. In other settings, time spent outside of a school or hospital environment is personal, beyond the scope of professional identity. Online applications, because of their wide access, provide an interesting exception.

Many medical students consider professionalism an important aspect of their daily work.¹⁹ Yet, only a small proportion of medical students in a recent study reported they were adequately prepared in professionalism and ethics.²⁰ Medical students, residents, and educators need to understand the professionalism associated with sharing private information publicly. Posting information online is not unprofessional, nor is finding friends, future partners, or associates. However, given the findings of this study, medical students and residents may not associate negative professional consequences with their current and future practice of sharing information that could be misinterpreted. Since students and residents are participating in online social networks, medical educators need to examine how they can proactively acknowledge and use such sites to teach about professionalism. This could include both discussion and mentoring.^{3,19}

This study has several limitations. First, this study was performed at 1 time, at only 1 institution, with a small number of in-depth analyses. It may be that other medical institutions have different patterns of networking use and norms of professionalism. However, we have no reason to think that these students and residents behave differently than those at institutions across the country, and any content that could be misinterpreted, of which we found ample evidence, demands attention. Second, this study does not detail who in particular uses this networking site. While there were variations by gender, there are likely greater variations by age and race/ethnicity that would yield different results. Further, there may be patterns of use that better correlate with professionalism. For example, unprofessional behavior, such as can be found on this site, may be correlated with future “burnout.”⁴ In contrast, social networking may provide a necessary outlet that enables students and residents to be more productive. Finally, this study does not claim to show evidence that the few potentially unprofessional uses of Facebook merit censorship of online networking. Many medical students and residents use Facebook in a positive way to share pictures with distant family and friends. Nonetheless, the fact that even some of the medical students and residents joined groups with names that

even joke at outrageous behavior or had provocative pictures begs for prompt interventions in medical education.

Medical students and residents may be ill-prepared for their developing professional lives. There could be ramifications of sharing personal information in publicly available profiles. Anecdotally, medical school applicants have been denied acceptance because of their profiles, yet unrestrained use persists. Thus, the findings from this study encourage active discussions of professionalism as it pertains to social networking to prepare future physicians to meet the ACGME competency.

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