Perceptions of Unprofessional Social Media Behavior Among Emergency Medicine Physicians

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ABSTRACT

Background Use of social media (SM) by physicians has exposed issues of privacy and professionalism. While guidelines have been created for SM use, details regarding specific SM behaviors that could lead to disciplinary action presently do not exist.

Objective To compare State Medical Board (SMB) directors' perceptions of investigation for specific SM behaviors with those of emergency medicine (EM) physicians.

Methods A multicenter anonymous survey was administered to physicians at 3 academic EM residency programs. Surveys consisted of case vignettes, asking, "If the SMB were informed of the content, how likely would they be to initiate an investigation, possibly leading to disciplinary action?" (1, very unlikely, to 4, very likely). Results were compared to published probabilities using exact binomial testing.

Results Of 205 eligible physicians, 119 (58%) completed the survey. Compared to SMB directors, EM physicians indicated similar probabilities of investigation for themes involving identifying patient images, inappropriate communication, and discriminatory speech. Participants indicated lower probabilities of investigation for themes including derogatory speech (32%, 95% confidence interval [CI] 24–41 versus 46%, $P < .05$); alcohol intoxication (41%, 95% CI 32–51 versus 73%, $P < .05$); and holding alcohol without intoxication (7%, 95% CI 3–13 versus 40%, $P < .05$). There were no significant associations with position, hospital site, years since medical school, or prior SM professionalism training.

Conclusions Physicians reported a lower likelihood of investigation for themes that intersect with social identity, compared to SMB directors, particularly for images of alcohol and derogatory speech.

Introduction

The use of social media (SM) by physicians, including Facebook, Instagram, and Twitter, has grown exponentially.[1–3] While SM has enhanced many aspects of medical practice, including education, communication, and professional collaborations,[4] it also harbors ethical- and privacy-related risks. Physicians have struggled to reconcile personal expression with privacy and professional boundaries. Medical literature cites multiple examples of unprofessional SM behaviors by students,[5] residents,[6] and attending physicians.[7]

In response to episodes of unprofessional behavior, regulatory agencies have issued guidelines to aid providers in appropriate SM use.[8,9] While guidelines prohibit some SM behaviors, such as falsifying credentials, there is a lack of consensus regarding behaviors that intersect with social identity, including alcohol consumption, reporting affiliations with political organizations, and expressing controversial personal beliefs.

There are few published articles exploring the associations of specific SM behaviors with the risk of investigation and subsequent disciplinary action by regulatory agencies. The only study to estimate the risk of formal investigation related to SM was from Greysen et al,[10] in which authors presented State Medical Board (SMB) directors with fictitious vignettes and asked their likelihood of investigation. They found that, while violations involving confidentiality, falsifying credentials, and inappropriate patient communication elicited high consensus for investigation, over 40% of SMB directors indicated that they would investigate more common behaviors, including images of holding alcohol without intoxication, if brought to their attention.[10]

It remains unclear if residents and supervising attending physicians who utilize SM share similar perceptions of professional SM use as that reported for SMB directors.[10] Understanding differences in perceptions of professional SM use among physicians and SMB directors is important to help guide educational interventions to avoid unprofessional

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Editor's Note: The online version of this article contains a table of Greysen themes, original vignette stems, and current modified vignette stems, and the survey used in the study.

behaviors and subsequent disciplinary action. Using a modified version of the Greysen et al[10] survey, we hypothesize resident and supervising attending physicians will underestimate the likelihood of SM behaviors leading to investigation, compared to SMB directors.

What was known and gap
Use of social media (SM) by physicians creates potential for unprofessional behavior, with a lack of guidance on behaviors that could lead to disciplinary actions.

What is new
A study compared emergency medicine trainees' and faculty perceptions of unprofessional SM behaviors to those of State Medical Board directors from a prior published study.

Limitations
Single specialty, convenience sample, and survey instrument without validity evidence.

Bottom line
Emergency medicine physicians across the educational continuum may underestimate the potential for investigations resulting from SM themes of derogatory speech and alcohol use.

Methods

Study Design

An anonymous questionnaire evaluating perceptions of SM behaviors was offered to emergency medicine (EM) residents and attending physicians at 3 academic medical centers: Baystate Medical Center (BMC) in Springfield, Massachusetts; University of North Carolina (UNC) at Chapel Hill; and Vidant Medical Center/East Carolinas Medical Center (ECU) in Greenville, North Carolina. Hospitals selected were a convenience sample of the investigators' home institutions.

Survey Development

Themes related to SM professionalism violations identified previously by Greysen et al[10] were divided into groups reflecting the degree of consensus among SMB investigators that such behaviors would result in investigation. The groups of high, moderate, and low consensus were used as the foundation for the current survey's case vignettes. High consensus themes included inappropriate patient communication (77%, 37 of 48) and use of identifying patient images (79%, 38 of 48). Moderate consensus themes included depictions of alcohol intoxication (73%, 35 of 48); use of potentially identifying patient images (65%, 31 of 48); and use of discriminatory speech, defined here as speech that attacks a person or group based on specific attributes such as gender or ethnicity (60%, 29 of 48). Low consensus included derogatory speech, defined here as speech meant to insult or disparage without targeting specific attributes (46%, 22 of 48), and images of holding alcohol without intoxication (40%, 19 of 48). Two authors (C.S. and N.W), who are EM physicians with resident leadership responsibilities, created EM-specific vignettes utilizing each of the above themes based on prior literature and personal experience (provided as online supplemental material).

For each vignette, participants were instructed to assume content was visible to the public on SM. Respondents rated their agreement to the following statements: "The content described is unprofessional" (1, strongly disagree, to 4, strongly agree), and "If the SMB were informed of the content, how likely would they be to initiate an investigation, possibly leading to disciplinary action?" (1, very unlikely, to 4, very likely). Likert scales and qualifiers replicated those used by Greysen et al.[10] Vignettes were piloted and modified for clarity and content appropriateness by 3 authors (W.S., R.J., C.S.H.) over approximately 3 working sessions. The final survey included 20 case vignettes as well as demographic and SM use questions (provided as online supplemental material).

The study was determined exempt by the Institutional Review Boards at the 3 institutions.

Data Collection and Analysis

Paper surveys were administered at each institution during scheduled resident conferences. No incentives were given for completing the study. Rotating medical students attending conferences on the day of the survey were also invited to participate. Survey data were hand-entered by site investigators and merged into a single, anonymous electronic database. Missing data comprised 0.01% of results and were excluded from analysis.

Demographic data were summarized using descriptive statistics. In accordance with Greysen et al,[10] Likert scores were collapsed into dichotomous responses (unlikely [1 and 2] and likely [3 and 4]). Combined participant scores were compared to prior published probabilities[10] using the exact binomial test.

Responses to the vignettes were stratified by the following variables: position (medical student, resident, attending physician); years since medical school graduation (less than 5, 5–10, 10–15, greater than 15); hospital site (BMC, UNC, ECU); personal SM use (yes/no); and self-reported prior SM professionalism training (yes/no). With regard to position, given their low response rate and similar supervisory roles in the emergency department, the 2 EM fellows who completed surveys were grouped with attending physicians for analysis. Two-sample *t* tests and 1-

TABLE
Descriptive Data of Medical Students, Residents, and Attending Physicians[a]

Category	Medical Students (N = 7), No. (%)	Residents (N = 68), No. (%)	Attending Physicians[b] (N = 44), No. (%)
Site			
BMC	1	21	8
ECU	0	21	25
UNC	6	26	11
Formal SM professionalism training	6 (86)	16 (24)	40 (91)
Have an SM account	6 (86)	64 (94)	34 (78)
I have friends in SM who are:			
Medical students	6 (86)	31 (46)	2 (5)
Residents	5 (71)	63 (93)	18 (41)
Attendings	2 (29)	44 (65)	23 (52)

Abbreviations: BMC, Baystate Medical Center; ECU, East Carolinas Medical Center; UNC, University of North Carolina at Chapel Hill; SM, social media.
[a] Data are presented as number and (percentages) of total.
[b] Two emergency medicine fellows were included in the attending physician category.

way analysis of variance were used to evaluate differences among dichotomous and categorical covariate groups, respectively.

To further evaluate differences in the perceived likelihood of SMB investigation, a post hoc sensitivity analysis was performed. Participants were stratified into their original position categories of medical student, resident, and attending physician. Participant scores and negative binomial testing were repeated to assess between-group differences. All statistical analyses were performed using R statistical software (R Foundation for Statistical Computing, Vienna, Austria).

Results

During fall 2013, a total of 119 participants, including 7 medical students, 68 residents, and 44 attending physicians, completed the survey, representing 58% of 205 practicing providers at the study sites. Fifty-two percent (62 of 119) of participants had previous formal SM training. Eighty-seven percent (104 of 119) of participants had active SM accounts, with 93% (97 of 104) using their real name (TABLE).

Compared to SMB directors,[10] participants expressed a significantly lower likelihood of SMB investigation for vignettes with themes, including derogatory speech toward patients (32%, 95% confidence interval [CI] 26–38, Greysen et al[10] 46%, $P < .05$); images of alcohol with intoxication (41%, 95% CI 32–51, Greysen et al[10] 73%, $P < .05$); and images of holding alcohol without intoxication (3%, 95% CI 1–7, Greysen et al[10] 40%, $P < .05$).

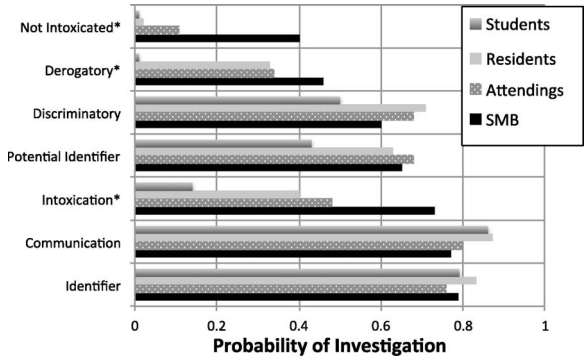
Themes that were not significantly different among participants and SMB directors[10] included inappropriate patient communication (83%, 95% CI 76–90, Greysen et al[10] 77%, $P = .80$); use of identifying patient information (80%, 95% CI 75–85, Greysen et al[10] 79%, $P = .69$); discriminatory speech (64%, 95% CI 55–72, Greysen et al[10] 60%, $P = .40$); and use of potentially identifiable patient information (69%, 95% CI 63–75, Greysen et al[10] 65%, $P = .22$).

We found no significant differences in the perceived likelihood of SMB investigation stratified by position ($F_{2,18} = 0.565$, $P = .58$); by time since graduation from medical school ($F_{3,24} = 0.348$, $P = .79$); or by hospital site ($F_{2,18} = 0.017$, $P = .98$). Additionally, there was no significant difference in perceived likelihood of SMB investigation in participants with an SM account compared to those without an account (0.58, SD = 0.22 versus 0.53, SD = 0.27; $t = -0.39$; $P = .70$), and no significance for those with SM professionalism training compared to those without training (0.52, SD = 0.28 versus 0.55, SD = 0.31; $t = -0.2$; $P = .84$).

Despite smaller numbers of participants, analysis revealed the same significantly lower likelihood for SMB investigation for themes involving intoxication, derogatory speech, and holding alcohol without intoxication for medical students, residents, and attending physicians. Themes of identifiable patient information, potentially identifiable patient information, inappropriate communication, and discriminatory speech were not statistically different than probabilities presented by Greysen et al[10] for medical students, residents, and attending physicians (FIGURE).

Discussion

Our study found that themes involving patient information, inappropriate communication, and discriminatory speech elicited similar probabilities of anticipated investigation by both EM and SMB directors, compared to published data.[10] However,



FIGURE

Probability of Investigation by State Medical Board Directors, Medical Students, Residents, and Attending Physicians for Social Media Behavior Themes

Abbreviation: SMB, State Medical Board.

* $P < .05$ on exact binomial hypothesis testing.

Note: Not Intoxicated, image of holding alcohol without intoxication; Derogatory, derogatory speech toward a patient; Discriminatory, discriminatory speech toward a patient; Potential Identifier, potentially identifying patient image; Intoxication, image of alcohol intoxication; Communication, inappropriate patient communication; Identifier, identifying patient image.

compared with SMB directors, EM physicians were less likely to anticipate that themes involving alcohol and disrespectful speech would be investigated.[10] Probabilities of investigation did not change according to position, hospital site, having an SM account, years since graduation from medical school, or prior SM professionalism training.

Issues of professionalism in SM are prevalent. In a survey of 60 US medical schools, 60% reported students posting "unprofessional online content," including 13% for violations of patient confidentiality, 52% for profanity, 48% for discriminatory language, and 39% for images of intoxication.[5] A 2012 survey found that 44 of 48 SMB directors recalled 1 or more online professionalism violations reported to their board during their tenure, which led to disciplinary outcomes including license restriction, suspension, or revocation at 56% of boards.[11]

Although issues of SM professionalism are prevalent, consensus on what constitutes unprofessional behavior remains elusive. A recent review of online professionalism studies found that themes involving patient identifying images, inappropriate communications, and discriminatory language were consistently regarded as most inappropriate, whereas derogatory speech, images of alcohol, and partial nudity were considered only moderate to least inappropriate.[12]

Further, important differences exist in perceptions of inappropriate SM behavior among various stakeholders. Medical students often regard themes of speech, alcohol, and dress as components of online "social identity" rather than potential unprofessional behavior.[13,14] In contrast, patients, supervisors, and regulatory groups demonstrate more conservative views. An online survey utilizing mock Facebook profiles found that, compared to university students, faculty and members of the general public rated images significantly less appropriate.[15]

Our findings are consistent with prior evidence: a high level of consensus for investigation in themes involving confidentiality, inappropriate communication, and discrimination, and a low consensus for themes associated with social identity, including derogatory speech and images of alcohol (with and without intoxication). Our results suggest there remains a disconnect in the perceived risk of unprofessional SM behaviors related to social identity in EM in all positions, including students, residents, and attending physicians.

There are several limitations to our study. First, the survey was only administered during resident conferences at academic hospitals and had a modest response rate, potentially conferring selection bias. Second, to maximize participant anonymity, we limited demographic information collected. We did not include age and sex, both of which are potentially important covariates when discussing SM professionalism. However, time since graduation from medical school, a proxy for participant age, demonstrated no difference in self-reported likelihood of investigation. Third, although the survey was evaluated and modified by study authors, it was not tested prior to implementation, and participants may have not interpreted the modified case vignettes as authors intended. Finally, while themes from Greysen et al[10] formed question stems, case vignettes were modified to reflect real-world EM scenarios. This may have inadvertently modified the original themes, and our comparisons with Greyson et al[10] should be interpreted with caution, as differences may be due to the new scenario format.

Conclusion

Our study demonstrates consensus among EM and SMB directors on unprofessional SM behaviors involving inappropriate communication, identifying patient images, and discriminatory speech. Compared to SMB directors, EM physicians continue to underestimate the potential risk of investigation for SM themes involving derogatory speech and alcohol use across the spectrum of positions that include students, residents, and attending physicians.

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