

Professionalism in medicine: a cross-sectional study comparing medical student and faculty attitudes using professionalism scenarios

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Abstract

Professionalism in medicine has long been regarded as a foundational aspect of medical practice. However, as societal norms change, expectations of professional behavior shift, increasing the complexity of defining professionalism in medical education. Medical students and faculty may hold varying definitions of professionalism, which can significantly impact medical education and the clinical environment. A cross-sectional survey study conducted from March 2025 to August 2025 assessed attitudes toward professionalism among medical students and faculty physicians at The University of Texas Dell Medical School in Austin, Texas (UT-DELL), and the University of New Mexico School of Medicine in Albuquerque, New Mexico (UNM SOM). The survey included 35 scenarios categorized as classroom, clinical, personal, or off-site behavior. It was administered to faculty and students, who evaluated professional behaviors on a five-point Likert scale. We received 31 faculty responses and 61

student responses. This study demonstrates strong consensus among faculty and students across key domains of medical professionalism, particularly regarding confidentiality, conflicts of interest, and relational boundaries. These areas of alignment suggest that specific behavioral standards and shared ethical values have remained consistent across generations of physicians. The most notable differences emerged in perceptions of professionalism related to technology use, generational change, and evolving social norms. Broader cultural shifts were evident in divergent opinions regarding the use of cellphones and artificial intelligence, personal appearance, and social media behavior. Ultimately, professionalism in medicine requires a balance between continuity and adaptation. By engaging faculty and students in a continuous process of reflection and dialogue, medical schools can cultivate a modern conception of professionalism that is both grounded in enduring values and responsive to the evolving context of medical practice.

Keywords: professionalism, medical students, ethics

Date submitted: 16-March-2026

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Introduction

Professionalism in medicine has long been regarded as a foundational aspect of medical practice. It encompasses various behaviors and attributes, including technical competence, ethical decision-making, effective communication, and the formation of strong, trust-based relationships with patients.¹ However, as societal norms inevitably change, the expectations for professional behavior shift, leading to increased complexity in defining professionalism within medical education. Younger medical students may prioritize aspects such as

Citation: Clithero-Eridon A, Jaiswal N, Travis K, Cavin J, and Markle T. Professionalism in medicine: a cross-sectional study comparing medical student and faculty attitudes using professionalism scenarios. *Educ Health* 2026;39:244-254

Online access: www.educationforhealthjournal.org

DOI: 10.62694/efh.2026.602

Published by The Network: Towards Unity for Health

work-life balance or patient-centered care differently. Physicians may view professionalism as a holistic quality that extends beyond the workplace, whereas medical students often perceive work behavior as separate from their personal lives.² These variabilities underscore the complexity of fostering a shared understanding of professionalism in medical training. Furthermore, the desire to emulate established cultural norms of professionalism must be grounded in trust in that system. Yet, arguments have been made that

institutions are failing to foster trust in the next generation of medical students.³

The consequences of unprofessional behavior in medical training are far-reaching and can significantly impact a physician's career. Unprofessional conduct early in medical training can lead to serious long-term consequences, including disciplinary action or difficulties establishing patient trust.⁴ However, despite its significance, the concept remains difficult to define in a way that is universally accepted across all cultures, generations, and institutions. Given these variations, it is crucial to understand how different cohorts perceive professionalism, as this perception can significantly impact medical education and the clinical environment.

The evolution of professionalism in medicine, along with its definitions, has been established.^{5,6} This study aims to explore the attitudes of medical students and physicians toward professionalism, using a social constructivist theory that posits that professionalism is not fixed; rather, it is constructed by culture, settings, and role expectations.⁵ We compared cohort responses across two medical schools to a series of hypothetical scenarios that assess various professional behaviors within and outside the professional setting.

Methods

Study Setting

Two medical schools participated in this study. The University of Texas Dell Medical School, Austin, Texas (UT-DELL), and the University of New Mexico School of Medicine, Albuquerque, New Mexico (UNM SOM) both have professional codes of conduct for medical students that focus on personal and professional responsibility, excellence in learning and patient care, honesty, and respect. None of the policies reference activities outside of the medical education setting or the use of emerging technologies.

Study Design

This cross-sectional study assessed attitudes toward professionalism among medical students and faculty. Indicators of interest for both cohorts were age and gender. We were also interested in the years of experience of faculty members as medical

professionals in academic settings. We asked the students about their year in medical school. The scenarios were created based on a literature review and experience. Questions were pre-tested by colleagues for comprehension.

The faculty and medical student survey included 35 scenarios to evaluate professional behaviors. The scenarios are the same for faculty and students, except for the artificial intelligence (AI) questions. We categorized scenarios into the following areas:

- (1) Classroom: Personal phone usage, punctuality, AI
- (2) Clinic: Confidentiality, patient inquiry, appearance, conflict of interest
- (3) Personal/Offsite Behavior: Social Media, Professional Boundaries, Social Interactions, Work-Life Balance. We did not define all potential nuances of personal relationships. For example, when a medical student dates a faculty member, nuances may arise, such as whether the faculty member is in a non-grading role or is faculty at a different institution but teaching other learners.

Participants rated each scenario on a five-point Likert scale: 1 = Highly Unprofessional, 2 = Unprofessional, 3 = Neutral, 4 = Professional, 5 = Highly Professional.

Sample

Two cohorts comprised our sample. The first cohort comprised medical students in years 1-4, and the second group consisted of faculty physicians. Medical students were invited to participate via an email sent to their School of Medicine email accounts. To recruit faculty, an email providing an overview of the study was sent to the appropriate clinical department chairs for distribution to their faculty.

Data Collection

We constructed and distributed the survey using RedCap between March 2025 and August 2025 to medical students and faculty at two medical schools.⁷

Data Analysis

We combined highly professional responses (4 and 5) and also combined highly unprofessional responses (1 and 2) due to the limited number of responses. RedCap provided simple statistics for context.

Ethics

The University of New Mexico Human Research and Review Committee approved this study (HRRC #25-140).

The University of Texas at Austin Office of Human Subjects Research approved this study (IRB # STUDY00007494)

RESULTS

We received 31 faculty responses and 61 student responses. The UNMSOM responses comprise 87% of faculty and student responses. No respondents were older than 70 or younger than 20. There were no osteopathic physicians among our respondents. The majority of faculty members have more than 10 years of experience as medical professionals in academic settings. In the student scenario questions, some responses totaled 60 rather than 61 because respondents were not required to answer every question. See Table 1 for Demographics.

Table 1: Demographics

	University of New Mexico SOM and Dell Medical Demographics	
	Physicians N = 31 (MD, PhD)	Medical Students (MS) N = 61
	N (%)	N (%)
Gender		
Female	22 (71%)	42 (69%)
Male	9 (29%)	18 (30%)
Prefer not to answer	0	1 (1%)
TOTAL	31 (100%)	61 (100%)
Age		
20–29	0	44 (72%)
30–39	9 (29%)	15 (25%)
40–49	9 (29%)	2 (3%)
50–59	7 (23%)	0
60–69	6 (19%)	0
TOTAL	31 (100%)	61 (100%)
Medical Students		
MS1		14 (23%)
MS2		18 (30%)
MS3		19 (32%)
MS4		9 (15%)
TOTAL		60 (98%)
Provider: Credentials		
MD	28 (91%)	
PhD	2 (.06%)	
MD/PHD	1 (3%)	
TOTAL	31 (100%)	
Years of Experience as a medical professional in an academic setting		
<5 years	4 (13%)	
6–10years	5 (16%)	
10+ years	22 (71%)	
TOTAL	31 (100%)	

Classroom

More than half of the physicians (N = 21, 68%) and medical students (N = 39, 64%) agreed that using a phone for personal purposes occasionally during lectures, rounds, or patient interactions is considered unprofessional. The means were 1.8 and 1.9, respectively. Medical students indicated that, if they or a faculty member occasionally arrive late for teaching rounds or scheduled meetings, this is

considered unprofessional (N = 55, 91%), more so than among faculty (N = 22, 71%). There was high concordance in ratings that it is unprofessional for a student not to submit assignments on time, with a mean of 1.1 among physician respondents (N = 30, 97%) and 1.0 among students (N = 59, 97%). Table 2 presents students' and faculty's responses regarding the use of AI.

Table 2: Artificial Intelligence Usage

Artificial Intelligence	Unprofessional	Neutral	Professional	
	N (%)	N (%)	N (%)	Mean
A student uses AI to...				
Research possible disease differential diagnoses during a clinical reasoning case.	10 (17%)	34 (57%)	16 (27%)	3.2
Generate a reflective essay for a written assignment	48 (80%)	11 (18%)	1 (2%)	1.4
A faculty member uses AI to...				
Create written descriptions and lab values for clinical reasoning cases, which they then edit.	2 (6%)	15 (48%)	14 (45%)	3.8
Generate an abstract for a manuscript that will be submitted to a journal.	20 (65%)	10 (32%)	1 (3%)	1.8

Clinical

We had two questions about appearance, and opinions on professionalism varied. Regarding students or faculty members with visible tattoos, facial piercings, or colored hair, four MDs (13%) considered this unprofessional, seven (23%) considered it professional, and the remainder remained neutral (N = 20, 65%). Among student responses, 7 (12%) considered it unprofessional, 23 (38%) considered it professional, and 30 (50%) were neutral. The second question was whether it was acceptable to occasionally wear casual clothing, such as jeans and T-shirts, in professional or clinical settings. Fifteen physicians (48%) considered it unprofessional, five (16%) considered it professional, and 11 (35%) were neutral. Of the 60 medical student respondents, 43 (72%) considered it unprofessional, and five (8%) considered it professional. The remaining 12 (20%) remained neutral.

We presented respondents with a variety of patient inquiry scenarios. Although a few responses were outliers, there was overall agreement that it is professional to make these inquiries. The mean responses ranged from 4.6 to 5.0. The scenarios and the underlying reactions include:

- (1) A medical student or faculty member asks a patient about their gun ownership and safety during a routine checkup. Two physicians (6%) thought this was unprofessional, and eleven medical students (18%) were neutral.
- (2) A medical student or faculty member asks a patient about their financial situation to assess potential barriers to accessing healthcare. One medical student (3%) and one physician (3%)

were neutral on whether this was professional.

- (3) A medical student or faculty member asks patients about their religious beliefs to understand their holistic healthcare needs. While only one physician (3%) was neutral regarding professionalism, six students (10%) were neutral.
- (4) A medical student or faculty member asks patients about their sexual history to assess potential risk factors for specific health conditions. There was 100% agreement that this was professional from both cohort responses.
- (5) A medical student or faculty member inquires about a patient's mental health history during an initial consultation. The majority of physicians (100%) and students (93%; N = 56) considered this professional, but one student rated it unprofessional, and three (5%) were neutral.
- (6) During a medical history assessment, a medical student or faculty member asks a patient about their sexual orientation or gender identity. One (2%) of the medical

students thought this was unprofessional. Two physicians (6%) and 10 medical students (17%) were neutral. The remainder believed this to be an appropriate question to ask.

We had one conflict-of-interest question: Is it professional for a medical student or faculty member to attend a conference or seminar sponsored by a pharmaceutical or medical device company, given the potential for bias. Thirteen (42%) of the physicians and 14 (23%) of the students believed it was unprofessional. Six physicians (19%) and 10 students (17%) responded that it was a professional approach. The remaining cohort responses were neutral.

We had five questions related to confidentiality. Responses are in Table 3: Confidentiality Scenarios.

Personal/Offsite Behavior

The personal and off-site behavior questions focused on work/life balance, professional boundaries, social interactions, and social media practices. See Table 4 for social interactions and professional boundary responses and Table 5 for

Table 3: Artificial Intelligence Usage

Confidentiality	Unprofessional		Neutral		Professional			
	N (%)		N (%)		N (%)			
A medical student or faculty member...	MD	MS	MD	MS	MD	MS	Mean	
Discusses patient cases with family members or friends outside of professional settings.	10 (33%)	36 (59%)	20 (65%)	22 (36%)	1 (3%)	3 (5%)	1.8	1.9
Discusses patient cases with their significant other, seeking advice or processing difficult experiences.	7 (23%)	14 (23%)	13 (42%)	29 (48%)	11 (35%)	18 (30%)	3.3	3.1
Accesses the electronic health records of a patient not under their care out of curiosity or academic interest.	29 (94%)	48 (79%)	2 (6%)	11 (18%)	0 (0%)	2 (3%)	1.1	1.5

social media responses. The scenario for work/life balance was, “A medical student/faculty member is overwhelmed by the demands of their job and personal life, calls out sick while working in a busy clinic, impacting patient care and increasing the workload for colleagues.” More than half (N = 18, 58%) of the physicians and 24 (40%) of the students considered this unprofessional behavior. Alternatively, 9 (29%) physicians and 16 (27%) students considered this professional. The remaining respondents were neutral.

Discussion

Our results indicate a general consensus on what constitutes professional and unprofessional behavior in medicine and medical education, yet there are areas of disagreement.

Classroom

There was strong agreement between faculty and students within classroom scenarios. We observed that phone use for personal purposes during educational or clinical interactions, along with failing to submit assignments on time, were

Table 4: Social Interactions and Professional Boundaries

	Unprofessional		Neutral		Professional			
Social Interactions	N (%)		N (%)		N (%)			
A medical student or faculty member...	MD ¹	MS ²	MD	MS	MD	MS	Mean	
Accepts a friend request or follow patients on their social media accounts	22 (71%)	43 (70%)	8 (26%)	17 (28%)	1 (3%)	1 (2%)		
Accept an invitation to dinner by a patient's family as an expression of gratitude for the care provided	11 (35%)	42 (70%)	19 (61%)	12 (20%)	1 (3%)	6 (10%)		
Accepting a gift from a patient as a token of appreciation	3 (10%)	18 (30%)	22 (71%)	36 (60%)	6 (19%)	6 (10%)		
Accept an invitation from a patient to a social event	6 (19%)	33 (55%)	22 (71%)	25 (41 %)	3 (10%)	2 (3%)		
Professional Boundaries								
Attend a social event with colleagues where alcohol is served	0 (0%)	1 (2%)	12 (39%)	27 (45%)	19 (61%)	32 (53%)		
Asking a patient out after they are no longer under their care	24 (77%)	43 (72%)	6 (19%)	15 (25%)	1 (3%)	2 (3%)		
A faculty member /medical student enters a romantic relationship with a resident physician	27 (87%)	34 (57%)	3 (10%)	23 (38%)	1 (3%)	3 (5%)		
A faculty member enters a romantic relationship with a medical student	27 (87%)	47 (78%)	3 (10%)	12 (20%)	1 (3%)	1 (2%)		

¹MD is medical doctor or PhD ²MS is medical student

Table 5: Social Media

Social Media	Unprofessional		Neutral		Professional			
A medical student or faculty member	N (%)		N (%)		N (%)		Mean	
	Faculty	Medical Students	Faculty	Medical Students	Faculty	Medical Students	Faculty	Medical Students
Posts criticisms of their medical institution's policies or practices on social media.	22 (71%)	29 (48%)	7 (23%)	25 (41%)	2 (6%)	7 (11%)	1.7	2.3
Shares strong political opinions on their public social media profile.	6 (19%)	14 (23%)	19 (61%)	33 (54%)	6 (19%)	14 (23%)	3	3
Posts a photo of themselves in a swimsuit on their public social media account.	4 (13%)	9 (15%)	24 (77%)	41 (67%)	3 (10%)	11 (18%)	2.9	3.1
Participates in heated debates on controversial healthcare topics on their public social media account.	9 (29%)	11 (18%)	15 (48%)	31 (51%)	7 (23%)	19 (31%)	2.9	3.3
Promotes medical products or treatments on their public social media account without disclosing potential conflicts of interest.	31 (100%)	58 (95%)	0 (0%)	3 (5%)	0 (0%)	0 (0%)	1	1.1
Shares details about interactions with students or patients on their public social media accounts, even if the information is anonymized.	29 (94%)	47 (77%)	2 (6%)	11 (18%)	0 (0%)	3 (5%)	1.1	1.6
Frequently wears clothing with their institution's logo and shares opinions on medical topics on their public social media account.	16 (52%)	24 (39%)	13 (42%)	27 (44%)	2 (6%)	10 (16%)	2.1	2.5
Post photos of students or patients on their public social media accounts to showcase their professional journey, with their consent.	11 (35%)	30 (49%)	12 (39%)	19 (31%)	8 (26%)	12 (20%)	2.8	2.4
Encounters a patient or student and decides to search for them on social media.	15 (48%)	53 (87%)	14 (45%)	8 (14%)	2 (6%)	0 (0%)	2.2	1.3

considered unprofessional. However, medical students were more likely to consider lack of punctuality for scheduled instructional activities as unprofessional compared to their faculty member counterparts; this difference may reflect a role-based expectation, such that students are more

likely to be evaluated on punctuality, while physicians may see themselves balancing competing responsibilities and may view slight delays as unavoidable, especially when patient care takes precedence. Longitudinal research demonstrates that unprofessional behaviors in

medical school are significantly associated with subsequent disciplinary actions by state medical boards, supporting the view that early lapses carry long-term implications.⁴

Additionally, there were differences in how AI was perceived, with faculty more comfortable using the technology to generate content for clinical cases, while students were more divided on using AI for differential diagnoses. One possible explanation is that faculty members are more confident and comfortable with their knowledge, enabling them to spot errors and edit AI-generated products more effectively. Students, on the other hand, may view the use of AI for idea generation as more akin to cheating, given that they are still in a learning mode rather than faculty teaching.⁸⁻¹¹ Faculty and students were comparable in describing AI-generated abstracts and assigned reflective essays as unprofessional, respectively, indicating a shared perception of AI use as potentially inappropriate in contexts that emphasize originality, authenticity, or intellectual ownership.

Clinical

There was strong agreement among faculty and students on core ethical areas, such as professional attire, the necessity of making various patient inquiries about traditionally sensitive topics, and the impropriety of discussing patient information with those who lack a need-to-know.

Students were more likely than physicians to rate visible tattoos, facial piercings, or colored hair as professional, whereas most physicians remained neutral. The neutrality may reflect nuances in appearance, such as the nature of tattoos (whether offensive or not), the practitioner's overall presentation (rather than focusing on one aspect), and patient expectations (older patients may expect a white coat and a "mainstream" appearance).¹² These differences in perceptions of professional appearance highlight a generational and cultural shift, where students may view a nontraditional physical appearance as inherently compatible with individuality and professionalism.

There was an overall agreement between students and faculty that it was professional to make patient inquiries during a routine checkup regarding gun

ownership and safety, financial situation and barriers, religious beliefs, sexual history, mental health history, and sexual orientation or gender identity. While one study found that physicians experienced discomfort when asking sensitive questions, our findings further emphasize that aspects of a patient's identity can significantly influence health outcomes.¹³ Firearm and sensitive-topic screening is widely regarded by both clinicians and patients as necessary for high-quality, equitable care, even though it may be uncomfortable, underscoring the importance of routine inquiry.^{13,14}

Responses to the conflict-of-interest question regarding attendance at industry-sponsored conferences revealed a lack of consensus among students and faculty. These neutral responses from students may stem from a lack of clear guidance, or from insufficient education about conflict-of-interest policies. Notably, a larger percentage of physicians (42%) than students (23%) view such attendance as unprofessional. This ambiguity is mirrored in national studies showing that medical students frequently encounter pharmaceutical marketing and often view industry interactions as acceptable, even as professional organizations advocate for stricter boundaries.^{15,16}

Regarding confidentiality, responses from students and faculty revealed both shared values and notable differences. First, a greater proportion of students (59%) than faculty (33%) viewed discussing patient cases with family or friends as unprofessional. This may reflect a greater emphasis on the boundaries of protected health information among students in their more recent, formalized training. Second, there was a strong consensus among faculty (94%) and students (79%) that accessing patients' electronic health records (EHRs) outside one's care for curiosity or academic interest is unprofessional, demonstrating a widespread understanding of EHR boundaries.

Personal/Offsite Behavior:

The work-life balance scenario revealed mixed perceptions of professionalism, with a greater proportion of physicians (58%) than students (40%) viewing calling out sick due to being overwhelmed

by work and personal life as unprofessional. One explanation is that physicians may prioritize their duty to patients and colleagues more heavily based on prior experience. In contrast, students may be more inclined to prioritize their personal well-being. A similar proportion of physicians (29%) and students (27%) thought calling out sick was professional, which may alternatively reflect evolving attitudes toward burnout and self-care in medical culture as an essential component of professional responsibility.^{17,18}

Regarding professional boundary questions, both students and physicians generally agree that engaging with patients on social media crosses professional boundaries, with over 70% of each group rating such behavior unprofessional. However, students were more likely than physicians to view other boundary-related scenarios, such as accepting dinner invitations, gifts, or invitations to social events from patients, as unprofessional. Student responses may reflect their recent medical training, which emphasizes caution in patient-provider relationships, whereas physicians may have more experience in utilizing contextual judgment.

Notably, physicians were more likely than students to view romantic relationships with residents as unprofessional (87% vs. 57%), with a substantial proportion of students (38%) remaining neutral. When considering romantic relationships between students and physicians, both groups considered them unprofessional (78% of students, 87% of physicians), although students were slightly more accepting. Together, these findings suggest that although foundational views on professionalism are aligned, physicians may hold more conservative perspectives on romantic boundaries, especially in situations involving hierarchical power differentials, compared to medical students.

Physicians consistently showed greater concern than students about social media posts that could reflect negatively on institutional reputation, such as criticizing policies (71% vs. 48%) or wearing institutional logos while discussing medical topics (52% vs. 39%). Conversely, students tended to be more accepting or neutral about personal expression

online, including posting swimsuit photos or engaging in controversial debates. There was strong consensus against searching for patients or students on social media; the majority of students (87%) and physicians (48%) reported that this is unprofessional. Overall, themes of institutional representation, privacy, and professionalism in online identity emerged as central to both groups, though physicians appear more conservative in interpreting what constitutes professional conduct.

Limitations: A limitation of this study is the low response rate from both institutions. In addition, it is important to note that professionalism is subjective, and our findings may not apply in all contexts. Another limitation is that we compared students' opinions of student actions, and faculty opinions of faculty actions, which is self-reflection and may introduce bias. As a future direction, we encourage other schools to survey faculty, staff, students, and community members to gain a general understanding of their "audience" before implementing any professionalism policies.

Conclusion

Professionalism continues to evolve in response to changes in culture, technology, and the daily realities of clinical practice. The findings of this study indicate that static rules or predetermined expectations cannot define professionalism. Instead, it should be understood as a dynamic construct shaped by lived experience, sociocultural context, and ongoing dialogue between learners and educators. In medical education, this necessitates curricula for professionalism that explicitly address emerging technologies, digital identity, and the increasingly fluid boundaries between personal and professional life. Faculty development initiatives should similarly encourage reflection on generational perspectives and model transparency regarding the tensions that arise in multigenerational and multicultural learning environments.

Ultimately, professionalism in medicine requires a balance between continuity and adaptation. By engaging faculty and students in a continuous process of reflection and dialogue, medical schools can cultivate a modern conception of professionalism that is both grounded in important

enduring values and responsive to the evolving context of medical practice.

Acknowledgment: The authors thank Kerry Song, MD, for creating the professionalism scenarios.

This project is supported by an award from the National Center for Advancing Translational Sciences, National Institutes of Health, under grant number UL1TR001449.

This paper was accepted as an in-progress research paper and a workshop at the Society of Teachers of Medical Education 2026 conference, Charlotte, NC.

All the authors have read and approved this manuscript. The requirements for authorship have been met, and each author believes that the manuscript represents their honest work.

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