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# Medical students' reflections on surgical educators' professionalism: Contextual nuances in the hidden curriculum

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ABSTRACT

*Introduction:* Surgical educators' professional behavior constitutes a hidden curriculum and impacts trainee's professional identity formation. This study explores the nuances of professional behaviors as observed in varying surgical settings.

*Methods:* 411 Transcripts originated from essays written by MS3 students during their surgical clerkship from 2010 to 2016 were collated. Employing a qualitative research methodology, we conducted a thematic analysis to uncover specific meaning emerging from medical student reflections' on surgical professionalism.

*Results:* In clinics, taking time and protecting patient privacy; in the OR, control over emotion during difficult situations and attention to learners; and in the inpatient setting, showing accountability above normal expected behavior were noted as professional. Similarly, unprofessional behaviors in these contexts paralleled lack of these attributes.

*Conclusions:* Behaviors observed and the attributes of professionalism in the surgical learning environment have contextual nuances. These variations in professionalism can be utilized in deliberate development of professionalism in surgery.



## Introduction

Professionalism is a universally recognized core competency of a surgeon and one of the six core competencies that a surgical trainee is expected to master by the Accreditation Council of Graduate Medical Education (ACGME). It is difficult to find a "one size fits all" definition and assessment tool for professionalism, as perceptions and expectations of professionalism vary depending on circumstances.[1] In fact, there is literature to support the fact that surgical specialties may present unique unprofessional behaviors.[2]

Most training programs lack formal training in professionalism and there are significant barriers to implementation even if one exists.[3] Hence, training programs at the undergraduate and graduate medical education level often depend on the hidden curriculum either entirely, or as a supplement to any formal professionalism curriculum. Surgical trainees, both medical students and residents, recognize both professional and unprofessional behaviors, and are influenced by their own observations and interpretations. Such observations accordingly provide an indirect, but contextually accurate reflection of the organizational structure and culture. In fact, defining tangible behaviors has been recommended by others in building a curriculum to teach professionalism to surgery residents.[4]

The hidden curriculum has been shown to play a significant role in teaching professionalism specifically to medical students.[5,6] The dynamic and subjective nature of professionalism in surgical practice is also noted in prior studies.[7] Expectant attributes and behaviors of a faculty surgeon and interpretation of such behavior can vary according to context and circumstances. For example: "effective interaction with patients and with people who are important to patients" is readily identified as an important domain of professionalism in the context of a clinic, but certainly not relevant in the operating room (OR).

Most surgeons, like all clinicians, are exposed to situations that challenge their ability to act professionally, and these challenges vary depending on the context. Surgeons' behaviors during challenging clinical encounters are often impactful, allowing the trainee to form his or her own professional behavior and identity based on

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what is observed. Even though the dynamic nature of professionalism is well recognized, there is limited literature on how contextual nuances can contribute to or influence this dynamism. Without a contextual understanding of professional/unprofessional behaviors in surgical settings, it is difficult to purposefully facilitate a constructive educational culture and environments that promote professionalism. Given that each specialty is distinctive in its practice, the understanding of surgical professionalism is optimally situated in each surgical clinical context. This study aims to investigate how the underlying attributes and behaviors that are interpreted as professional or unprofessional by students vary according to the clinical context in which they were noted.

## Methods

This is a longitudinal qualitative study that analyzed six years of medical students' observations of professionalism during their surgical clerkship.

### *Study setting and participants*

The study setting was a clerkship program at Southern Illinois University School of Medicine in the United States. As part of the third-year surgical clerkship, medical students provided reflective essays on professional and unprofessional behaviors that they observed during their surgical rotation. This activity was part of the 10 week third year surgery clerkship curriculum. In the clerkship, all students were required to have two weeks each of general, trauma, and colorectal surgery. The remaining four weeks students selected one week rotations from the remaining specialty surgery services available.

### *Data collection*

All third-year medical students were required to submit their reflections on specific situations where they experienced or observed both professional and unprofessional behaviors. The reflections were guided by two open-ended questions: (1) Describe an instance where a surgeon or surgery resident did something that you believe is a positive example of professionalism. (2) Describe an instance where a surgeon or surgery resident did something that you believe was unprofessional behavior. This method to request a specific instance is a critical incidents technique that is commonly used in qualitative research.[8,9] The essays were not evaluated for a grade, and were discussed in a group exercise at the completion of the clerkship with the senior author.

### *Data analysis*

With IRB approval from the Springfield Committee for Research in Human Subjects (# 19–511), we analyzed six-years (2010–2016) of essays (n = 411). The team of two surgeons, a nurse educator, a medical student, and two medical education researchers collaboratively conducted the data analysis. Using the inductive thematic analysis method we examined the meanings of professionalism that emerged from the data without any predefined conceptual framework.[10,11] In the initial phase of the data analysis, we held six consensus meetings where the team members conducted open coding and discussed their understanding of the codes. In this way, the group was able to collaboratively generate an initial list of codes and improve the group consensus on the meaning for each code. The remaining data were assigned to each team member for open coding. During the open coding process, the team members shared their new codes with the remaining team members.

During collaborative coding, contextual codes emerged from the data, such as operating rooms, clinic, and hospital. Perceiving the significance of such contextual environments in understanding surgical professionalism during the first data analysis phase, we decided to further analyze the entire data set a second time from the perspective of the different contextual settings. We reorganized the essay data using six different categories (combination of positive/negative behavioral factors in all three contextual settings). Each team member was assigned a subset of contexts to conduct axial coding where properties of frequent codes and relationships among codes are analyzed, which led to emerging themes. Then, the entire team discussed the initial themes to compare and contrast all surgical contexts.

**Table 1**
Number of quotes by context.

| | Professional | Unprofessional | Total |
|---|---|---|---|
| Clinic | 99 | 34 | 133 |
| Operating Room | 102 | 166 | 268 |
| Inpatient | 131 | 102 | 233 |
| Total | 332 | 302 | 634 |

## Results

Findings demonstrated both distinct and delicate nuances of professional and unprofessional behaviors in the three surgical contexts (clinic, OR, and in-patient wards). As seen in Table 1, it is noted that the professional behaviors are observed somewhat equally in all three clinical contexts; however, unprofessional behaviors are more frequently observed in the OR setting. For each setting being reported, we offer a brief introductory comment on the setting to frame the contextual nuances students' reflections frequently highlighted. Table 3 contains representative quotes for each theme identified.

### *Clinic*

In outpatient clinics, especially those for surgical subspecialties, time pressures related to high patient volume and throughput requirements are typical. The context is thus fertile for time investment related examples of professional or unprofessional behavior, and for observations related to the volume and traffic of multiple patients in a busier public setting.

#### *(Positive) taking extra time for patients' needs*

As seen in Table 2, 'taking time' was the most frequent code in clinical settings. Students noted when additional time and resources were committed to a patient in the clinic, even if that meant falling behind schedule. When the physician takes extra time to answer questions or to use alternative methods of explanation (e.g. drawing, analogies) to ensure patients clearly understand what was discussed, this was recognized as an example of high professional standard. Students perceived the surgeon taking extra time for a patient as highly professional, especially when the patient was receiving difficult news, such as that related to a new cancer diagnosis. As reflected on many essays, learners perceived taking extra time as a sign of caring for a patient as a whole rather than just fulfilling surgical care obligations for the patient.

#### *(Positive) protecting patient privacy and modesty in public and private spaces*

In a clinic public and private spaces exist together where patient privacy can be vulnerable. Students witnessed on numerous

**Table 2**
Frequently occurring codes in each context.

| Context | Professional (Code Frequency) | Unprofessional (Code Frequency) |
|---|---|---|
| Clinic | taking time (43)<br>explanation (28)<br>patient education (27)<br>patient centered (23)<br>difficult situation (21)<br>communication skills (19) | disrespectful attitude & behavior (8)<br>ignoring patient (7)<br>lack of compassion (5)<br>not taking time (5)<br>difficult patient (4)<br>dishonest (3)<br>poor communication skills (3)<br>judgmental (3) |
| **OR** | respectful (22)<br>teaching (16)<br>patient centered (16)<br>calm (15)<br>creating comfortable environment (15)<br>difficult situation (15) | disrespectful attitude & behavior (52)<br>displaying anger (40)<br>uncomfortable environment (35)<br>response to error (23)<br>rude (22)<br>not directed toward students (20)<br>difficult situation (16)<br>insulting someone in public (15)<br>patient as an object (14) |
| **Inpatient** | taking time (47)<br>patient centered (33)<br>communication skills (32)<br>difficult situation (27)<br>explanation (23)<br>respectful (16)<br>physical proximity to patient (13)<br>family involvement (13) | disrespectful attitude & behavior (29)<br>patient as an object (13)<br>rude (12)<br>not directed toward students (10)<br>displaying anger (9)<br>cold joke (7)<br>unfavorable behaviors toward novice learners (7)<br>ignoring patient (7) |

occasions that patients were discussed in the hallway or in an office with an open door, allowing for a passersby to hear. In this setting, students observed how unusual, but professional, it was to not discuss cases in public places and to only present cases in an office with the door closed to preserve privacy. As the excerpt (Table 3) indicates, the attending was attentive to establishing an appropriate space for discussing patient information, which would not happen without his/her active effort. Students also appreciated attendings' scrupulous efforts to protect patients' privacy and modesty by closing the door when they changed clothes before and after an exam.

*(Negative) criticizing or making insensitive remarks about patients*

In the clinic setting, physician-patient interactions involve fewer people, and this allows students to more readily witness specific patient relationship dynamics and their effects. Students specifically noted situations where attendings were directly reproachful toward patients, and recognized this as unprofessional behavior. For example, a student witnessed an attending becoming frustrated by a patient's noncompliance or a perception of poor self-care, and noted he "raised his voice in an argumentative way towards a patient." Students also considered physicians making insensitive remarks about patients as a demeaning behavior. For instance, they found it insensible when they heard a resident saying "very good" to a patient after he listened to his patient's sexual abuse history. It was obvious that the resident did not 'listen' to the patient. These insensible behaviors were also observed in a nonverbal way when an attending made a gesture of mocking sign language to a blind patient, for instance.

*(Negative) not fully focusing on or resolving patients' needs and complaints*

In clinics, students considered ignoring and being less mindful about patients as unprofessional. Brushing patients off or ignoring their complaint of pain to avoid further discussion, as well as concluding a discussion with a patient in a dismissive and demeaning way were seen as typical examples of such behaviors. Some attendings left insufficient time for questioning or further consultation even when acknowledging that the patient did not understand the shared information. Students found it unprofessional when an attending did not take time with a patient with cancerous symptoms instead of acknowledging her fear, or when they did not fully disclose the risk of complication of a surgery even though the patient had a concern about it. Additionally, students considered it as unprofessional when an attending became disgusted and stopped listening to a patient presentation, knowing that the patient was a prisoner.

*Operating room*

The OR presents a unique setting where the surgical team is responsible for the care of an often unconscious patient. There is a pressure on the attending physician to perform an operation in an efficient and safe manner, but there is always the threat of an unexpected event prolonging or even derailing the procedure. These events may be relatively benign, such as unexpected scar tissue or excess adipose tissue to be dissected, or a mild annoyance like having improper equipment. In rare cases, a potentially life-threatening event such as uncontrolled bleeding may occur. These unexpected events and the attending's or resident's response to them creates a major area of focus in the OR context for how their professionalism is viewed by students.

*(Positive) demonstrating positive demeanor during a difficult situation*

Even though most medical students are naive to the surgical culture and environment when they start their surgery clerkship, they do easily recognize the tensions inherent to the higher-stakes OR setting. Students frequently remarked about how a positive demeanor (respectful, patient centered, and calm), especially in response to stressful situations in the OR, was seen as an example of high professionalism. As seen in the excerpt (Table 3), a student found it professional when the surgeon remained calm and patient

**Table 3**
Themes and representative quotes by context.

| | |
|---|---|
| Clinic Positive | Taking Extra Time for Patients' Needs<br>An attending I was with in the clinic was giving a patient some bad news. When the attending went to get the patient more info to read about his disease, the patient said he was illiterate. The surgeon spent upwards of 45–60 min going over multiple possible procedures including some that he would be able to travel to a more specialized surgeon to have done. The patient was obviously very thankful and I could tell he was not used to this kind of treatment when he told people he couldn't read. (14-15-C-5)<br>Protecting Patient Privacy and Modesty in Public and Private Spaces<br>A surgeon I had clinic with went out of her way to give her patient's a professional and respectful experience. If they had to change clothes, she always checked to make sure the drapes were drawn and the door closed. After her exam, she allowed the patient a few minutes to put clothes back on before discussing plans and management. Even though rooms were tied up longer, I feel like these considerations made the patients more comfortable in the clinic environment. (11-12-B-15) |
| **Clinic Negative** | **Criticizing or Making Insensitive Remarks About Patients**<br>When the doctor came into the room for consult he told her she needed to stop smoking and didn't even acknowledge the work she had already done, cutting down on the packs of cigarettes she was smoking. He grilled her on the hepatitis she was diagnosed with and seemed [to] jump to the conclusion she was/is a drug user. When it was all said and [done] he completely downplayed her concern about the lipoma, told her that her surgery was only cosmetic and didn't need to be done, scoffed at the burn she had on her arm and as the physician left he turned to the resident, with the patient in ear shot and said," Make sure to put on gloves. She has hepatitis." In a diminutive and condescending way. While I don't completely believe the woman needed the surgery, [the attending] doesn't know how she contracted hepatitis or that she will never touch a cigarette again, she is a human and didn't need to be treated like a lesser individual. (15-16-A-13)<br>**Not Fully Focusing on or Resolving Patients' Needs and Complaints**<br>Once in clinic there was a patient that was clearly below average mentally that came in for a follow-up for a removal of a skin cancer. The patient had questions and asked them, but it was clear that the answers that the physician gave were not completely understood by the patient. Instead of attempting to slow down the conversation and trying to explain the answers [to] the patient's questions, the physician continued to "speak over" the patient's head. Once we left the physician told me how he wishes patients like that would bring someone that could "understand things better" with them when they have an appointment. (12-13-A-1) |
| **OR Positive** | **Demonstrating Positive Demeanor During a Difficult Situation**<br>The patient was late getting into the OR, there were issues with the anesthesia equipment, the scrub nurse contaminated herself, and there was even trouble with getting the robot situated once the case got underway. However, the attending never got impatient. He remained calm and light-hearted even though he knew he would likely be delayed for the following surgery and would probably be here into the early evening. (12-13-B-10)<br>**Creating a Positive Learning Environment**<br>One particular episode stands out in my mind where a surgeon really impressed me by her overall professionalism and extraordinary humanity. Aside from her unflinching positive attitude, what stood out the most was her insistence on knowing everyone's name in the OR, her uniform respectfulness towards everyone on the team-including [the] medical student, her tactful refusal to allow rude comments towards a morbidly obese patient in the OR, her humbleness in light of her exceptional knowledge, her willingness to teach patiently, her calm and control during a highly stressful moment in surgery and her inclusion of me as medical student while following up with patient's family after surgery. (10-11-C-2) |
| **OR Negative** | **Prolonged Entitled Uncontrolled Anger Toward Colleagues**<br>One of the surgeons I was scheduled to work with had a surgery ahead of his that ran late, causing his procedure to begin about 45 min behind schedule in a different room than was originally scheduled. When we got into the OR, he was instantly furious with the nursing staff that his supplies were not being set up fast enough. The circulating nurse was tripping over herself and repeatedly apologizing for not moving fast enough. The surgeon never apologized and continued to bark orders at the nurse throughout the entire surgery. He took his frustrations out on the wrong people. (15-16-D-1)<br>**Treating Unconscious Patients as Objects**<br>Prior to the beginning of one surgery, a resident and some nurses in the OR made inappropriate comments about the size of the patient and some disrespectful jokes about the patient under anesthesia. I thought this was unprofessional and made me somewhat resentful of the surgical field as I have encountered this a few times through med school. I felt that if this was my family member, I would not want such people operating on them. (10-11-C-3)<br>**Condoning the Culture of What Happens in the OR Stays in the OR**<br>One of the attendings I followed for a couple of cases was very nice towards everyone, but had a tendency to say various things in the OR that some may find offensive. A lot of the jokes that were told were undoubtedly inappropriate. I felt like with that kind of attitude, it was only a matter of time before a hospital employee with a grudge would report the surgeon for saying something offensive that would result in some kind of administrative action. It was very obvious in this instance, but I also observed similar attitudes throughout much of the clerkship, described as "what happens in the OR stays in the OR". I say these behaviors are unprofessional because I seriously doubt the people acting this way would be proud of their actions in front of awake patients. (15-16-D-5) |
| **Inpatient Positive** | **Addressing Patients' Needs in a Time Crunch**<br>One that particularly stood out to me was when my resident took a lot of extra time to sit with a patient with newly diagnosed pancreatic cancer to go through all of her options with surgery or otherwise. He did not have to have this talk because [another physician] was already going to come see the patient later, but I thought it was very kind of him to take the time and explain to the patient what was going on. He drew pictures and laid out all [available] options, and I thought that even though he didn't have all of the information about the procedure/outcomes, I think the patient really appreciated the talk. [The resident] was very respectful, sat down, and made the talk about what the patient's goals were. I hope to do talks like this when I am a physician. (15-16-D-3)<br>**Committing to Teamwork for Better Patient Care**<br>As a third year medical student you spend a good portion of your day feeling superfluous and it's an uncomfortable feeling no matter how often you live with it. That day was busy enough I wouldn't have been upset about being ignored – that was just the way of it. But instead this resident went out of his way to include me, have me do work, teach me, and give me the freedom to make my own plans. If the aspect of professionalism I interact most with on a daily basis is teaching, then I felt like this was a supreme example of that. (11-12-B-12) |
| **Inpatient Negative** | **Ignoring Patients' Needs as if they are a Burden**<br>Physicians have treated their patients as burdens instead of as people on rounds. They have disrespected patients' loved-ones' concerns and dismissed their worries without providing solace or knowledge. The physicians I've worked with have rarely taken time to explain to the patient what is going on in a way the patient could understand. (13-14-C-2)<br>**Lacking Sensitivity – Labeling Patients**<br>The comments that I have heard about patients are less than positive. For example, a woman had multiple comorbidities and she was asking questions about her PAS boots and the head of her bed for sleeping with an NG tube. Those questions were seen as ridiculous and burdensome to the residents and the patient was labeled as needy and a know it all. I just felt that was unfair because if I was in her situation then I would have had a million more questions. (13-14-C-5)<br>**Humiliating Team Members**<br>While I was making morning rounds and working on the 6th floor cardiac wing for my cardiothoracic elective, one of the cardiothoracic surgeons began to berate the nursing staff and clerks around him. I was working at the desk when the doctor began to just simply yell at the staff around him. Apparently they were having trouble connecting an outside caller to his desk phone and he was very upset because of it. For a prolonged period of time, he was simply irate, stomping from his desk to the nurse's station, using such phrases as: "How stupid can you be?" "Just how dumb is the staff around here?" |

(*continued on next page*)

**Table 3** (*continued*)

| | |
|---|---|
| | "Do you want me to come over there and do your (expletive deleted) job for you?" Needless to say he did upset the staff as well as the other medical and surgical doctors around him. Worse yet was the fact that there were a large number of patients and their families walking the halls who witnessed the entire event. (10-11-B-18) |

amid a delayed case due to unexpected accidents. Another student also recognized such professional behaviors made procedures "flow with more efficient and harmonious teamwork." When students witnessed attendings handling difficult cases without raising their voices, not only did they praise the attending's' positive demeanors, but they also remarked that they wanted to "emulate" such behaviors.

*(Positive) creating a positive learning environment*

In the OR, students observe faculty and residents taking time to teach learners as a particular representation of professionalism. Students recognized surgeons' active effort to create a positive learning culture in the OR as representing professionalism, especially in difficult situations. As found in numerous essays creating a positive learning environment in the OR includes several behaviors: respecting team members, intolerance of rude comments towards a patient, controlling a highly stressful moment with calmness, as well as willingness to teach during an operation. Students acknowledged attendings' endeavors to meet students' learning needs by asking questions without intimidating them, and giving them opportunities to assist with the case. A student appreciated an attending when she gave the student "appropriate responsibility" and allowed her "to aid directly" in a surgery, which made her feel that she was "directly contributing to a patient's care and well-being." Even upon learners' mistakes during surgery, the attending's coaching them in a supportive manner was also perceived as a desirable teaching practice.

*(Negative) prolonged entitled uncontrolled anger toward colleagues*

As seen in Table 2, disrespectful behaviors and displaying anger were the most frequent codes. Students saw those attendings' unprofessional behaviors in the OR as being associated with their sense of entitlement in the space. As seen in the excerpt in Table, and similarly in numerous essays, when an error occurred before or during surgery and the attending surgeon displayed personally oriented anger toward his/her colleagues, such as nurses and residents, this was cited as unprofessional. In some stressful situations in the OR, students were consternated by a few attendings throwing surgical instruments on the operating table, on the ground, or even toward team members, which threatened the safety of everyone in the OR. The anger would often be prolonged creating an uncomfortable environment in the OR which students saw as affecting the potential for learning and possibly negatively impacting patient outcomes.

*(Negative) treating unconscious patients as objects*

In the OR, patients are frequently under anesthesia. Unprofessional behaviors in the OR are strongly associated with this unique situational context. During preparation for the surgery or at its completion, the patient is often unconscious or sedated and exposed on the OR table, an inherently vulnerable situation for a human being. In this context, students observed that the patient can become the target of mocking and belittling comments that would not be made in the face of a conscious patient. Disregard for a patient's privacy and inherent dignity was recognized when surgeons laughed at or made derogatory comments about a patient's body habitus, a behavior especially noted towards obese patients. These disrespectful behaviors were recognized as treating unconscious patients as objects, not as human beings who worthy of protection, dignity, and respect. Students often witnessed such behaviors during an uncomfortable situation in the OR, and they found them insulting to the patient but accepted as the surgical team's unwritten norms. Interestingly, these unprofessional behaviors toward patients were observed with residents and nurses as well as attendings, suggesting a permissive cultural context within the OR on such themes.

*(Negative) condoning the culture of what happens in the OR stays in the OR*

Unprofessional behaviors were also seen as being associated with the surgical group's willingness to condone the unique OR culture of 'what happens in the OR stays in the OR". As seen in the excerpt (Table 3), even if inappropriate behaviors and remarks happened, the teams seemed to have an unwritten and unspoken consensus and expectations that these will not go outside of the OR. Essays demonstrated that students recognized these permissive unprofessional OR team behaviors would not have occurred or been accepted by other team members if the patient had been awake and aware of what was being said. To make matters worse, such an insulting behavior of a physician and nurses even happened when a patient was being anesthetized right before a major surgery, and a medical student scrutinized their inappropriate behavior, being concerned about the possibly-awake patient's uncomfortableness.

*Inpatient*

The in-patient ward setting also has unique work flow characteristics. Unlike medical rounds, surgical rounds are often somewhat unscheduled and associated with a certain urgency or time pressure around other duties including operations, trauma responses, and outpatient clinics. The style and timing of rounds vary between attendings, residents, and institutions. Unexpected adverse clinical outcomes often require immediate attention to both medical and psychological patient needs. Finding a balance between rounding efficiently enough to be ready for the first case, yet slow enough to fully attend to patient needs and questions is a theme that was noticed and commented on by students.

*(Positive) addressing patients' needs in a time crunch*

Attending physicians and residents who are professional and compassionate about their patients take sufficient time to provide the best medical service to them, overcoming numerous obstacles such as patient frustration, busy hospital schedules, or limitations of their boundaries of care. Students considered it as professional when physicians took time with each patient to explain in detail the management plan and answer questions. Demonstrating care for patients and their families, as if the attending "had all the time in the world," was also seen as professional. This was exemplified when an attending or resident would help a patient whilst under time duress or when a physician would help a patient who was not one of her/his own.

*(Positive) committing to teamwork for better patient care*

Another aspect of professional behavior in the in-patient setting was connected to commitment to fellow team members. When students observed residents willingly "offering help to their colleagues" or "never complaining about picking up" colleagues' duties, they recognized the teamwork as professional, and considered it as evidence of patient commitment as well. As seen in the excerpt (Table 3), including students in team-based patient care was also perceived as professional from students' perspectives. When an attending "introduced himself and the team to the patient and their family" during trauma rounds, students felt that it not only helped the team build a positive relationship with the patient and family, but also reduced confusion about each team member's role in the patient's care.

*(Negative) ignoring patients needs as if they are a burden*

Disrespectful attitude & behaviors and treating the patient as an object were two of the most frequently used codes in this setting (Table 2). Students considered it as unprofessional when they saw physicians abandoning their patients as if it was not their duty to provide necessary medical care or to fully respond to their questions. For instance, students witnessed "surgical residents leaving the room in the middle of a discussion with patients," who had questions, or they saw attendings leaving patients abruptly because of a patient's noncompliance. Moreover, getting annoying patients switched to another team or not sharing critical medical information with a patient to avoid further engagement with the patient were also considered as negative professional behaviors from student perspectives. In such a moment, a student wished that the physician "stayed with the team, discussed the situation with the family member, and came up with a plan to help the patient" to demonstrate care and commitment.

*(Negative) lacking sensitivity regarding patients*

Students observed attendings and residents poke fun at their patients or inappropriately comment on certain traits or behaviors such as life-style, appearance, or understanding of a diagnosis in public or even in front of other patients. Students did not miss the negativity when a group of healthcare professionals were derogatory to a patient's weight and appearance or in an instance when a resident laughed at a patient's suicidal intention. Labeling a patient based on their body type, medical status, or character was also considered as disappointing and unprofessional behavior. An example of a mentally disabled patient in Table 3 also corroborates the theme.

*(Negative) humiliating team members*

Students recognized the importance of teamwork and team relationships in effective inpatient care. They accordingly perceived it as unprofessional when physicians disregarded their colleagues from other specialties, rather than supporting colleagues or appreciating others' work and contributions. Residents making disrespectful comments about the nursing staff or hearing an attending gossip about colleagues were examples of unprofessional behaviors that undermined team integrity and function. Recalling a resident talking derogatorily about another specialty and describing them as "the bottom of the totem pole," a student regarded that as a hierarchical mentality that is "not healthy for team morale and is detrimental toward patient management and the functioning of health care as a whole." Students also perceived it as unprofessional when physicians were criticizing or humiliating staff members confrontationally and publicly in a repeated or prolonged manner as seen in the excerpt (Table 3). Last but not least, physicians making "sexual innuendos" to nursing staff in various situations were regarded as unprofessional.

## Discussion

This qualitative study based on a large data base of reflective essays revealed both subtle and distinct differences in how surgeons behave in all patient care venues. It is not surprising that the OR has unique characteristics that make certain unprofessional behaviors more likely to occur due to the nature of the closed environment, traditional hierarchy, and the unique stresses inherent in that setting.[2] In comparison, it was interesting that students reported the least amount of unprofessional behavior in the clinic. The clinic tends to be a more controlled and socially-accountable environment, which may influence professional behaviors in that setting. It is possible that the simple necessity of direct interactive time with patients in that context enhances the perception of patient centered care, which is seen as professional behavior by students.[12] There is also the possibility that self-serving misbehavior is less likely to occur if a surgeon is concerned about the potential financial impact that would occur if patients choose to go elsewhere for elective procedures as a result of unprofessional behavior in the clinic. In the hospital setting, providers may find it easier to hide in the crowd of multiple healthcare providers in a fashion that is not so easy in the clinic.

It seems obvious that we need to provide students with the best possible role models during critical times in which they are developing their own professional identity. The behavioral findings noted in this study can be helpful as a framework for developing a guided hidden curriculum for medical students or residents, who are yet to form their own professional identity. As Rogers[5] discovered, students almost always changed their understanding of professionalism during their clerkships and they frequently identified specific behaviors that they planned to avoid or adopt. Therefore, it is essential that we identify these positive and negative behaviors in all settings so that we can become more effective in how we teach professionalism.

Our study also provides some guidance and insight into 'what to look for in a surgeons behavior' in building their professionalism portfolio, and noting such behaviors in clinically relevant contexts such as clinic, operating room and in-patient wards. Similar to our study, Sullivan et al., based on medical student reflections, formed a framework of professionalism. In that study, the framework of professionalism highlights eleven specific personal attributes and competencies.[13] Other studies have also identified additional personal attributes that are essential in the development of strong professional behaviors.[14,15] Even though identifying specific personal attributes or competencies such as respect, altruism, clinical competency etc., in relation to clinical contexts are beyond our study, the specific themes identified in our study do reflect the presence or absence of underlying personal attributes and/or competencies. For example, the presence or absence of respect, as applied to all members of the healthcare team and patients, underlie numerous behaviors that were identified in our students' essays. In addition, it is interesting to note that awareness and

control of emotions are critical in the OR, but multitasking, time management skills, which are essential in the clinic and the inpatient setting, seem to be less important in the OR with its singular focus. Awareness of the situations in which certain behaviors or deficiencies might be most apparent could be useful in identifying them, leveraging aptitudes, and addressing weaknesses. The findings of the current study provide valuable contextual insight into the framework for teaching and assessment of professionalism; further study may elucidate specific personal attributes that are most impactful in each clinical venue. Ultimately having the ability, potentially informed or directed by awareness of such contextual nuances as herein described, to identify specific deficiencies in professional behavior early in a physician's development may make it possible to impact later clinical performance, as was reported by Dorsey in a study of early medical student professional interventions.[16]

Despite the significance of the longitudinal investigation of the student perspectives the current study is not free from limitations related to the nature of the data and the study design. The student focus leaves out other stakeholders' experiences and perspectives in the learning environment (i.e., faculty, residents, nurses, and staff). What students perceived as unprofessional could also be seen as professional from a different stakeholder's perspective, and vice versa. To address this limitation, a future study examining the topic of professionalism in different educational contexts involving multiple stakeholders' views would be of value.

## Conclusions

Medical students' self-reflective essays at the end of a traditional surgical clerkship highlight contextual nuances to the hidden curriculum of professionalism as demonstrated by faculty and resident behaviors. Specific patterns of professional and unprofessional behavior are identified in contexts including clinics, OR, and inpatient wards. Awareness of these patterns may be useful in identifying cultural and other elements contributing to students' and other learners' professional formation, and may facilitate curricular and system level interventions.

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## Declaration of competing interest

The authors declare that there are no conflicts of interest.

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