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Student-derived solutions to address barriers hindering reports of unprofessional behavior

Ms. Jaden R. Kohn^{#1} [fourth-year medical student], Dr. Joseph M. Armstrong^{#2} [resident physician], Dr. Rachel A. Taylor³ [resident physician], Dr. Diana L. Whitney⁴ [resident physician], and Dr. Anne C. Gill⁵ [associate professor]

¹Baylor College of Medicine, Houston, TX

²Department of Urology, University of Utah School of Medicine, Salt Lake City, UT

³Department of Medicine, Tulane University School of Medicine, New Orleans, LA

⁴Departments of Medicine and Pediatrics, University of Colorado School of Medicine, Aurora, CO

⁵Department of Pediatrics and Center for Medical Ethics, Baylor College of Medicine, Houston, TX

These authors contributed equally to this work.

Abstract

Introduction—Barriers hinder medical students from reporting breaches in professional behavior, which can adversely impact institutional culture. No studies have reported student perspectives on how to address these barriers successfully. Our study 1) evaluated the likelihood of reporting based on violation severity, 2) assessed barriers to reporting, and 3) elicited students' proposed solutions.

Methods—Four medical students designed a cross-sectional study in 2015. In response to seven scenarios, students rated likelihood to report the violation, indicated perceived barriers, and identified solutions. Additional questions investigated the perceived importance of professionalism, confidence in understanding professionalism, and trust in administrative protection from negative consequences.

Results—272 students in their clinical years (MS2–4) responded to the survey (RR=50%). Students were 70–90% likely to report major violations, but less than 30% likely to report minor or moderate violations. Barriers included concerns about an uncomfortable relationship (41%),

Correspondence Anne C. Gill, DrPH, MS, RN, Baylor College of Medicine, Office of Curriculum, One Baylor Plaza, BCM300, Houston, Texas, USA 77030, Phone: 713-798-7760, Fax: 713-798-8552, gill@bcm.edu.

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potential negative repercussions on grades or opportunities (23%), and addressing by direct discussion rather than reporting (23%). Solutions included simplified reporting, control over report release date, improved feedback to reporters, training for real-time resolution of concerns, and a neutral resource to help students triage concerns. No differences existed between classes regarding the importance or understanding of professionalism. In linear regression, only importance of professionalism predicted likelihood of reporting and this did not change with training.

Conclusions—Hindered by common barriers, students are unlikely to report a violation unless it is a serious breach of professionalism. Student-derived solutions should be explored by medical school administrators to encourage professionalism violation reporting.

INTRODUCTION

Medical professionalism has been described many times in the literature without universal consensus in the definition, but with many repeated themes.¹⁻³ Sentinel reports defining medical professionalism include the Association of American Medical Colleges “A Flag in the Wind”,⁴ the ABIM/ACP/EFIM Physician Charter on Medical Professionalism,⁵ and the Professionalism Competency defined by the Accreditation Council for Graduate Medical Education.⁶ Definitions encompass general characteristics of virtue and humanism, as well as delineate specific actions and behaviors.

In the process of training future medical professionals, institutions often employ formal curriculum during the preclinical years to instruct students in professionalism.⁷ However, studies have shown that the professional qualities that students possess when entering medical school decline as they advance through their clinical training.⁸⁻¹¹ The literature attributes this trend to systematic desensitization to ethical and moral dilemmas via the “hidden curriculum”^{12, 13} through which students observe and learn from the professional and unprofessional behaviors modeled by residents and faculty.^{14, 15} Students often struggle to resolve the dissonance between the formal curriculum regarding professionalism and ethics, and the unprofessional behaviors modeled in the clinical setting.⁷

Failure to identify and subsequently address violations of professionalism allows the behavior to persist and even flourish, and is associated with future indiscretions.^{16,17} Conversely, prompt identification of and response to unprofessional behavior improves satisfaction, retention, patient safety, and productivity.¹⁸ Reporting to institutional committees is an important mechanism to identify unprofessional behavior and is the initial step in addressing such behaviors. This has the potential to improve the culture of professionalism at academic institutions.

While reporting professional lapses of peers and superiors can be challenging for individuals at all levels within an institution,¹⁹ it is particularly challenging for medical students.^{20,21} Barriers that hinder medical student reporting of peers include fear of retaliation by peers, an effort to maintain camaraderie, and the belief that students are not responsible to report misconduct of peers.²² Barriers that hinder medical student reporting of unprofessional behaviors by residents or faculty include the intrinsic hierarchical nature of the medical team, fear of reprisal (e.g., poor evaluations or negative impact on residency opportunities), concern about disrupting team dynamics, or uncertainty about the seriousness of the

unprofessional behavior.^{8,23,24} Nationally, the 2015 AAMC Graduation Questionnaire demonstrated that 58% (n=3130) of students thought the professionalism concern was not important enough to report, 37% (n=1960) thought nothing would be done, 26% (n=1391) feared reprisal, and 19% (n=1090) resolved the issue on their own.²⁵ No published studies provide students' perspectives on how to address these barriers successfully. Our study aimed 1) to evaluate the likelihood of medical student reporting based on violation severity, 2) to assess students' perceived barriers to reporting, and 3) to elicit students' proposed strategies to encourage reporting.

METHODS

Setting

The study was conducted at Baylor College of Medicine (BCM), a medical school in Houston, Texas, with approximately 730 medical students. The admissions process utilizes traditional interviews, rather than the multiple mini interview (MMI) format. Students participate in clerkships beginning in the spring semester of the second year. Clerkships occur at four sites: a 538-bed Veterans Affairs hospital, a 671-bed children's hospital, an 850-bed non-profit adult hospital, and a 486-bed county hospital.

The professionalism curriculum consists of a series of didactic lectures interspersed throughout the preclinical years. Professionalism is explicitly taught in the first-year ethics and "doctoring" courses, with additional didactics reinforcing and exploring professional identity formation during the clinical years. Professionalism competencies are assessed by all clinical evaluators in the end-of-clerkship evaluations, using four questions to measure professionalism with respect to patients and families, colleagues and team, other students, and self-improvement. Specific concerns of unprofessional behavior in medical students could be reported to a professionalism committee, which responds in a standardized process with a guided-reflection intervention.²⁶

At the time of the study, medical students could report unprofessional behavior by peers, residents, and faculty through several methods: 1) "on-the-fly" reports using E*value™, 2) reports to the professionalism committee via the institutional intranet, 3) informal comments to student representatives on the professionalism committee, 4) formal comments in the end-of-clerkship evaluations of faculty or residents, 5) verbal or written reports to a clerkship director, chief resident, or attending physician, and 6) if the unprofessional behavior jeopardized the safety of a patient, reports to the patient safety committee at each hospital using the individual hospital's intranet reporting system.

Study Design & Survey Development

Under the guidance of an academic mentor, four medical students designed a cross-sectional study using a 33-question survey with quantitative and qualitative elements to inquire about students' 1) experiences with professionalism violations, 2) likelihood of reporting a professionalism violation, 3) perceived barriers to reporting, and 4) potential solutions to encourage reporting. The survey did not provide respondents with a formal definition of

professionalism, as students are familiar with the institutional professionalism competency, which is modeled after the ACGME Competency.⁶

To identify professionalism violations for inclusion in our survey, each medical student co-investigator composed a list of five to ten professionalism violations, drawn from the literature²⁷⁻²⁹ and from his/her clinical experiences. Using an iterative process, we then selected seven scenarios considered to be most representative and assigned a severity to each professionalism violation, such that the seven scenarios included two minor, three moderate, and two major violations. Among these seven scenarios, we included one violation of minor severity and one violation of major severity to serve as in-survey quality control questions. Violation severity did not affect the order of scenarios in the final survey.

After the violation scenarios were selected, we conducted a focus group to inform the multiple-choice options to be presented in the survey for barriers and solutions. Via email, we invited all BCM medical students in their clinical years to participate. Eight students participated: five second-year students, one third-year student, and two fourth-year students. One co-investigator moderated the focus group, while two co-investigators transcribed the discussion. The session was not recorded to encourage open discussion on a sensitive topic and to protect confidentiality. We began by asking participants to share their experiences with reporting professionalism violations by residents and faculty. We then facilitated dialogue about barriers and solutions by systematically discussing the seven scenarios. For each scenario, focus group participants were asked to suggest at least two barriers that would prevent them from reporting and at least two potential solutions that would encourage them to report. We concluded by encouraging participants to share any final thoughts on the topic of reporting professionalism violations by residents and faculty. The final survey was approved by the Baylor College of Medicine Institutional Review Board, and included 33 questions. The first question asked about the respondent's year in medical school for subgroup analysis. Next, there were four questions regarding attitudes towards professionalism and reporting. Two questions used a sliding scale format, with anchors at 0 and 1, in which respondents could indicate their response to two decimal points, producing a continuous variable. First, respondents were asked to rate the extent to which they considered professionalism to be important, with 0 as "not important at all" and 1 as "very important." Second, respondents were asked to indicate their confidence in understanding what constituted a reportable violation of professionalism, with 0 as "not confident at all" and 1 as "very confident." The next two questions used a true/false format, and inquired about a respondent's 1) trust in institutional protection from possible negative repercussions for reporting, and 2) willingness to report an event if it had several witnesses rather than a single witness.

The next 28 questions were scenario-based, with four questions for each of the seven scenarios. The first question examined how likely a student was to report the scenario, measured using a continuous scale from 0 to 1 with 0 being "not likely at all" and 1 being "very likely". The next two questions inquired about the barriers that prevent reporting and solutions that would encourage reporting. Respondents were permitted to select as many barriers as applicable for each scenario, but were limited to selecting one solution per scenario, in order to identify the most feasible solutions and to assess if different violations

require different solutions. Respondents could also provide free-text remarks about barriers and solutions. Multiple-choice options for barriers and solutions were selected using responses from the focus group, based on recurring themes and feasibility. The final question for each scenario inquired whether a student had witnessed that violation; respondents selected yes or no, creating a binomial variable.

Survey Distribution

We created the survey using Qualtrics online survey software. The survey was open for participation in May and June 2015. All BCM medical students (graduating classes of 2015-2018, n=726 students) received an email with a description of the study and an invitation to participate, with a link to the secure Qualtrics survey. We sent two emails, two weeks apart – the first using the class list-serve and the second using individual email addresses. Concurrently, we posted invitations to participate on social media pages for each class. All participants were given the option to enter a drawing for small-value gift certificates at local retailers by providing an email address at the end of the survey. Email addresses were dissociated from survey responses to protect respondents' anonymity.

Data analysis

We analyzed data using IBM SPSS Statistics for Windows, Version 23 (IBM Corp, Armonk, NY). We performed descriptive statistics for all questions. To compare differences among groups, we stratified responses by year in medical school and by response to the true/false questions. We used Student's t-test to compare groups on mean difference, and a Pearson's Chi-square to compare groups on proportions. We used multivariate linear regression to determine associations between independent and dependent variables. The dependent variable was likelihood of reporting a violation (continuous variable from 0 to 1); the predictor variables were year in medical school and the four non-scenario-based questions (importance of professionalism, confidence in understanding what constitutes a "reportable" violation, trust in administrative protection from repercussions, and likelihood to report if several witnesses were present).

RESULTS

To be included in analysis, respondents had to be in their clinical years: second year (MS2), third year (MS3), or fourth year (MS4). First-year students were invited to participate, but their responses were excluded from analysis due to limited clinical exposure. In total, there were 272 respondents from the MS2-MS4 classes (50%): 78 MS2 students (42%), 116 MS3 students (68%), and 78 MS4 students (42%).

Scenario-based questions

The mean likelihood of reporting each scenario is shown in Table 1. Reporting the minor control and both major situations is strongly unlikely and strongly likely, respectively. When scenarios were aggregated by severity, there was a statistically significant mean difference in the likelihood of reporting comparing minor and moderate scenarios, minor and major scenarios, and moderate and major scenarios ($p < 0.001$ for all three pairwise comparisons).

Table 2 shows the frequency for each barrier in all scenarios, and the three barriers most frequently cited for each scenario. The three most significant barriers to reporting were concern for an awkward relationship, preference for directly discussing the issue, and concern for a negative impact on grade/opportunity. At least 25% of respondents in each class selected one or more of the top three barriers in all scenarios.

We also analyzed barriers by year in medical school. Concern for an uncomfortable or hostile relationship was the most frequently selected barrier at all levels of training (MS2 39%, MS3 38%, MS4 39%). For students in their fourth-year compared to more junior students, concern for a negative impact on grades/opportunities was a less common barrier (MS2 26%, MS3 25%, MS4 18%), while feeling like a valuable member of the team was a more common barrier (MS2 13%, MS3 9%, MS4 18%).

Table 3 shows potential solutions to encourage reporting; the top two solutions were the most frequently selected solutions for all seven scenarios. Table 4 illustrates the proportion of respondents from each class who reported witnessing each scenario. Of note, only scenarios 1 and 5 were similar among all classes, whereas the prevalence of witnessing scenarios 2, 3, 4, 6, and 7 increased as students progressed through training.

We did not perform a formal qualitative analysis on the open-ended responses provided by students, as the data was limited. However, informal exploration revealed that students had widely different responses to professionalism violations. When asked about forging an attending's signature, one student stated that he or she would "absolutely report this under any circumstance," whereas others stated that they "couldn't be bothered" or "would feel like a valued team member" if asked to do this. Multiple students felt apathetic about reporting violations because of the perceived lack of follow-up on reports and requested increased transparency about the outcomes after reporting a violation, such as a notification that the administration has taken action to address the reported incident. Other students also noted apathy about reporting because they perceived that some violations were pervasive throughout the institution, and thus change would be difficult or unlikely. A few students expressed a desire for more clarity about what constitutes a "reportable offense". A few students disliked the idea of incentives as a solution to promote reporting violations, stating that "better patient care should be enough of an incentive." One student felt that reporting was unnecessary and preferred to "handle [the issue], at least at first, by discussing the issue with the individual involved."

Non-scenario-based questions

Students across all classes rated their confidence in understanding what constitutes a reportable violation of professionalism at 0.70 on average, and a statistically significant increase as students progressed through their clinical training (0.67 vs. 0.72 vs. 0.73, $B=0.03$, $p=0.02$). However, this increase in understanding is small and may or may not be clinically significant.

There was no statistically significant difference among the classes in their perception of the importance of professionalism; students across all classes rated it at 0.86 on average (0.86 vs. 0.88 vs. 0.84, $p=0.45$). Additionally, linear regression demonstrated that the only variable

predictive of likelihood of reporting a violation in five of the seven scenarios was importance of professionalism (scenario 1: $p=0.18$, scenario 2: $p<0.01$, scenario 3: $p=0.06$, scenario 4: $p<0.01$, scenario 5: $p=0.03$, scenario 6: $p=0.01$, scenario 7: $p=0.01$). Year in medical school, confidence in understanding the definition of professionalism, trust in administrative protection from potential retaliation, and several witnesses were not predictive of likelihood of reporting.

For the true/false questions, 72% of respondents indicated that they did not think the administration would protect students from potential negative repercussions if they report unprofessional behavior, and 87% stated that they would be more likely to report a professionalism violation if the situation had several witnesses.

DISCUSSION

While the literature includes several student perspectives on professionalism education, no previous studies describe solutions to overcome barriers that hinder reporting of unprofessional behavior. The solutions presented here align with previously suggested recommendations for professionalism education, but are uniquely student-driven.

Likelihood of reporting did not appear to correlate linearly with the severity of the scenario. The likelihood of reporting the major violations was 70% and 90% while the likelihood of reporting any minor or moderate violations was less than 30%. Thus, unless the behavior is an obvious and serious violation of professionalism, students are relatively unlikely to report. The clear disparity between major and less severe violations reinforces the difficulties in defining the magnitude of a violation and determining the necessary steps to remedy the violation.

Our findings regarding the major barriers are consistent with those previously identified in the literature (hierarchy and desire for a good grade³⁰). We found that students only selected unique barriers in a few scenarios, independent of violation severity. Students were unclear whether a professionalism violation occurred when asked to obtain informed consent and when a resident or attending is wearing soiled attire. Students did not perceive a direct impact on patient safety or health, and thus did not report, only regarding derogatory remarks about patients. Students felt like valuable members of the team when a superior used their notes without seeing the patient and when asked to obtain informed consent – suggesting that students appreciate being given clinical responsibility, but also feel it is expected that they contribute to the efficiency of the team.⁸ Lastly, students were unsure of the best way to report the violation only when an attending or resident was working under the influence (possibly due to the urgent nature of the situation).

While fear of an uncomfortable or hostile relationship persisted at all levels of training, the pattern of barriers cited by the fourth-year students was unique. These students had already matched to residency at the time of survey distribution. As students finalize grades and letters of recommendation early in the fourth year for residency applications but continue to hone clinical skills over the remainder of the year, we hypothesize that observed differences in cited barriers stem from the fourth-year students' preparation for resident-level

responsibilities. Additionally, students witnessed more violations as their training progressed. Residents or faculty may be more trusting of students with greater clinical experience and thus request that these students perform duties that exceed their responsibility,²⁰ but make them feel like a valuable member of the team.

The most commonly cited barriers affect the majority of situations involving unprofessional behavior, across all levels of medical student training. These barriers, if successfully addressed, may have the broadest impact. We propose three solutions.

First, we suggest an improved method of reporting. Many students responded that the reporting process at our institution was too complicated, neglected to sufficiently preserve anonymity, and failed to indicate that follow-up had occurred. Students would be more likely to report a concern if they could choose the time that the report was released, which would reduce the likelihood of an uncomfortable relationship or of any potential negative impact on grades, letters, or opportunities. Additionally, students expressed that they would be more likely to report if the process were simplified. Notification of action taken after a report was filed would improve students' confidence that the institution values professionalism. However, the appropriate extent of information to provide while preserving the confidentiality of the individual reported warrants further consideration. Second, we propose improved professionalism training for students, residents, and faculty. Brainard and Brislen recommended that education involve a clear definition of professionalism,³ but the medical education community has been challenged to clearly define professionalism and the bounds of unprofessional behavior,^{31,32} while others suggest this may be an ever-evolving process.³³ Our data provide evidence that students did not struggle with the minor and major scenarios; however, students could use increased guidance regarding appropriate responses to violations considered more "moderate." We recommend addressing situation-specific uncertainties. Perhaps clinical students could suggest the situations discussed during preclinical professionalism training, improving the emphasis on "grey areas" of professionalism while avoiding extreme examples. While professionalism instruction during the preclinical years is essential,⁷ additional formal instruction in professionalism during the clinical years should allow students to ask clarifying questions about real or realistic situations. In addition, clarification could be provided by each clinical clerkship detailing expectations of professionalism specific to that field and that department's method to limit negative repercussions after a report is filed.

Additionally, as part of professionalism training, students, residents, and faculty should be trained on conflict resolution and effective methods to address professionalism concerns in real time, as the second most commonly cited barrier to reporting indicated that students had a preference for face-to-face resolution of concerns rather than formal reporting.

Third, we recommend a neutral peer resource (e.g., student advocate or ombudsman) to help students triage concerns and guide them in the reporting process. This solution was the second most-frequently selected by our respondents and indicates the usefulness of a peer-system in helping students navigate the challenges of professionalism reporting. In our experience, students tend to feel comfortable approaching their peers for aid in determining whether a concern is "worth reporting" and how best to report it.

We found no change in the self-reported importance of professionalism among the three classes, contrary to prior literature reporting a decline.¹⁰ Additionally, importance of professionalism predicted likelihood of reporting. Together, this implies that a student's perception of the importance of professionalism prior to matriculation may be a key factor in determining the likelihood of reporting a violation throughout medical school. Dr. Jordan Cohen argues that the culture of an institution can only reinforce and empower the humanistic attributes that matriculants already possess.³⁴ As such, we encourage medical school admissions committees to seek novel ways to assess importance of professionalism to each applicant, in order to cultivate a more robust culture of professional behavior.

Our study had a number of limitations. First, our response rate was only 50% of clinical students. The second-year class was in their first months of clerkships, limiting their clinical experiences and responses. Three of the four investigators were part of the third-year class at the time of the survey, likely contributing to the high rate of peer participation. The fourth-year class was near or after graduation from medical school. The repetitive format of scenario questions may have contributed to survey fatigue, limiting the overall response rate and the number of thorough open-ended responses. Lastly, the generalizability may be limited, as multiple-choice options for barriers and solutions were compiled by students with a discrete set of clinical experiences during their training at our institution.

CONCLUSION

Medical students choosing not to report unprofessional behavior continues to be a significant problem at medical colleges across the United States. An institutional system that allows students to report freely without fear of retribution or other barriers can advance a culture of safety and professionalism.^{18, 35} When developing professionalism curriculum and institutional policies and when training faculty and staff, medical school administrators should give weight to student-derived solutions that address barriers known to hinder reporting – particularly lack of student anonymity and protection from potential negative repercussions. The student-derived solutions recommended here include simplified reporting systems with a delayed report release option, increased clarity about professionalism expectations with a focus on “moderate” scenarios, training for real-time resolution of professionalism concerns, improved communication with clerkship directors about departmental response to professionalism concerns, and a neutral peer group to help students triage their concerns. Individual and multi-institutional studies should be performed to identify additional student-derived solutions.

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Table 1

Likelihood of reporting violations, stratified by severity of the violation

Scenario		Severity	Likelihood of Reporting		
			Mean $\pm$ SD	Mean difference $\pm$ SD	
1	Your attending or resident comes to work dressed in a dirty white coat or with blood on their scrubs.	Minor <i>Control</i>	0.12 $\pm$ 0.17	Moderate vs. Minor 0.07 $\pm$ 0.01 *	Major vs. Minor 0.61 $\pm$ 0.01 *
5	Your attending or resident makes derogatory remarks about patients.	Minor	0.29 $\pm$ 0.27		
2	Your attending or resident asks you to see a patient, then subsequently copies, pastes, and signs your note as their own note - without seeing the patient.	Moderate	0.27 $\pm$ 0.28		
3	In a crowded elevator, your attending or resident discusses a patient case using identifying patient information.	Moderate	0.30 $\pm$ 0.27		
7	Your attending or resident asks you to obtain informed consent on a patient who is about to undergo a procedure.	Moderate	0.25 $\pm$ 0.26	Major vs. Moderate 0.54 $\pm$ 0.01 *	
4	Your attending or resident asks you to forge the attending's signature on a prescription for a controlled substance, in order to help the clinic run more efficiently.	Major	0.72 $\pm$ 0.33		
6	Your attending or resident comes to work under influence of alcohol or drugs.	Major <i>Control</i>	0.91 $\pm$ 0.16		

*p<0. 0001 for all pair-wise comparisons of mean difference of likelihood of reporting by severity group.

Table 2

Barriers to student reporting, all scenarios

Barrier	Total Responses N (%) *	Scenario; Rank (% of respondents)						
		1	2	3	4	5	6	7
I am concerned that reporting would create an awkward, hostile, or uncomfortable relationship between me and the person I reported.	112 (41%)	1 (31%)	1 (44%)	1 (49%)	1 (45%)	1 (49%)	1 (43%)	
I would directly discuss the professionalism violation with the individual involved, instead of reporting it.	63 (23%)	2 (28%)		2 (32%)	2 (31%)			3 (25%)
I fear that reporting will negatively impact my grade, learning opportunity, research opportunity, or letter of recommendation.	63 (23%)		2 (29%)	3 (27%)	3 (25%)	2 (30%)		
I am unclear about the <i>best</i> way to report the infraction.	49 (18%)						2 (32%)	
I am unclear whether this situation violates professionalism standards.	30 (11%)	3 (27%)						1 (30%)
I feel like a valued member of the team when this occurs.	27 (10%)		3 (29%)					2 (30%)
I do not perceive that this issue directly impacts patient safety or health.	24 (9%)					3 (23%)		
No action occurred in the past when I reported, so it did not seem worthwhile to report.	3 (1%)							
Other	19 (7%)						3 (13%)	

* Number and proportion of respondents who selected each barrier for all scenarios. Respondents could select multiple barriers for each scenario, thus the total is greater than 100%. The top three barriers for each scenario are shown in rank order, with the corresponding proportion of respondents selecting each barrier.

Table 3

Solutions to encourage student reporting, all scenarios

Solution	Total Responses N (%)
Implement a system in which the release of reporting is delayed to a time specified by you.	100 (37%)
A small group of fellow medical students is established as a single starting point to address professionalism concerns; they would serve as an advocate for you and help take the issue to appropriate individuals.	64 (24%)
Reporting of <u>valid</u> professionalism concerns is looked on favorably by clerkship directors when determining your final grade for the rotation.	51 (19%)
Your dedication to professionalism is specifically noted in your dean's letter or letter of recommendation.	13 (5%)
Other	44 (16%)

The percentage equals the proportion of respondents who selected that response as a solution to any scenario. Respondents could select one solution per scenario. The top two solutions were the most commonly selected solutions for all seven scenarios, so scenarios are not shown separately.

Table 4

Respondents who witnessed professionalism violation scenarios

	MS2	MS3	MS4	Avg MS2 – 4
Scenario 1: Dirty white coat or blood on their scrubs.	26%	18%	33%	26%
Scenario 2: Use your note without seeing the patient.	36%	50%	67%	51%
Scenario 3: Discuss patient information in a public location.	41%	46%	47%	45%
Scenario 4: Forge signature for a controlled substance.	1%	5%	8%	5%
Scenario 5: Derogatory remarks about patients.	74%	84%	77%	79%
Scenario 6: Under the influence of alcohol or drugs.	0%	0%	4%	1%
Scenario 7: Obtain informed consent from a patient.	27%	40%	68%	45%