

How Do Medical Schools Identify and Remediate Professionalism Lapses in Medical Students? A Study of U.S. and Canadian Medical Schools

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Abstract

Purpose

Teaching and assessing professionalism is an essential element of medical education, mandated by accrediting bodies. Responding to a call for comprehensive research on remediation of student professionalism lapses, the authors explored current medical school policies and practices.

Method

In 2012–2013, key administrators at U.S. and Canadian medical schools accredited by the Liaison Committee on Medical Education were interviewed via telephone or e-mail. The structured interview questionnaire contained open-ended and closed questions about practices for monitoring student professionalism, strategies for remediating lapses, and

strengths and limitations of current systems. The authors employed a mixed-methods approach, using descriptive statistics and qualitative analysis based on grounded theory.

Results

Ninety-three (60.8%) of 153 eligible schools participated. Most (74/93; 79.6%) had specific policies and processes regarding professionalism lapses. Student affairs deans and course/clerkship directors were typically responsible for remediation oversight. Approaches for identifying lapses included incident-based reporting and routine student evaluations. The most common remediation strategies reported by schools that had remediated lapses were mandated mental health evaluation (74/90; 82.2%),

remediation assignments (66/90; 73.3%), and professionalism mentoring (66/90; 73.3%). System strengths included catching minor offenses early, emphasizing professionalism schoolwide, focusing on helping rather than punishing students, and assuring transparency and good communication. System weaknesses included reluctance to report (by students and faculty), lack of faculty training, unclear policies, and ineffective remediation. In addition, considerable variability in feedforward processes existed between schools.

Conclusions

The identified strengths can be used in developing best practices until studies of the strategies' effectiveness are conducted.

Over the past three decades, professionalism has become a central theme in medical education and patient care. Medical schools and accrediting bodies are establishing professionalism standards, creating curricula, and performing assessments on physicians-in-training.^{1–15} Once seen as the product of innate character traits, professionalism is now understood as a complex, dynamic, and evolving process based on the competing demands placed

on individuals in the context of the organizational environment.¹⁶

Becoming a medical professional can be seen as a developmental process of “professional formation”^{11,17,18} in which learners should gain knowledge from their mistakes. Evaluation of professionalism is complex, interpretive, and contextual, and it must take into account individuals, interpersonal relationships, and societal–institutional factors.¹⁹ It is complicated by lack of consensus on a definition of professionalism in medical education.²⁰

In 2004, Papadakis and colleagues²¹ reported an association between unprofessional behavior in medical school and subsequent disciplinary action by a state medical board, underscoring the importance of addressing professionalism lapses early. In recognition of the importance of medical professionalism, in 2008 the

Liaison Committee on Medical Education (LCME) implemented standard MS-31-A (now element 3.5), requiring medical schools to detail the methods they use to develop, assess, and remediate professional attributes in medical students.²²

Despite the mandate that medical schools identify and remediate professionalism lapses in medical students, little is known about best practices in remediation.²³ In 2012, an Alpha Omega Alpha Honor Medical Society think tank recommended (1) gathering data on existing remediation practices and (2) identifying current best practices in remediation for dissemination until formal evidence-based effectiveness research could be completed.²⁴ Such data are essential to answering critical questions, including but not limited to the following: How should professionalism lapses be reported? Who should make decisions about the need for

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and the type of remediation? Who should conduct remediation? What methods should be used in remediation? How can the efficacy of remediation efforts be determined?

We sought to address this gap in the literature by exploring practices used to identify and remediate lapses in professionalism among medical students at U.S. and Canadian medical schools accredited by the LCME. Although issues related to medical student professionalism remediation extend beyond the United States and Canada, we chose to focus on schools required to meet the LCME standard.

Method

We conducted a mixed-methods study of LCME-accredited medical schools in the United States and Canada, using structured interviews to gather information about professionalism remediation practices. The Drexel University College of Medicine institutional review board determined that this study was not human subjects research.

Instrument development

We were not able to identify any published instruments that could address all of the data collection necessary for this study; therefore, we (D.Z., S.G., D.D., S.R., and D.N.) developed a specialized questionnaire for use in telephone interviews. We based the questions on Swick et al¹³ and Bennett et al,²⁵ and we added additional questions through an iterative process. The questionnaire was pilot-tested in telephone interviews with deans at two institutions and modified on the basis of their feedback. Data collected during these pilot interviews were included in the analysis.

The questionnaire used in the first 47 interviews consisted of 16 questions, including closed- and open-ended queries, and was divided into four sections: policies regarding professionalism, identification of students with professionalism lapses, administrative response to lapses, and remediation of lapses. Respondents were asked about feedforward practices and about the strengths and weaknesses of their systems in handling professionalism lapses. After 47 interviews, we added 3 questions related to specific examples

of lapses to clarify student behaviors necessitating remediation. These additional questions were e-mailed to all previous respondents and were included in the telephone interviews thereafter. (For the final questionnaire, see Supplemental Digital Appendix 1 at <http://links.lww.com/ACADMED/A278>).

Participant recruitment

The 153 U.S. and Canadian medical schools accredited by the LCME as of April 25, 2012, were eligible to participate in the study. We obtained a list of these institutions' education deans, with e-mail addresses, from the Association of American Medical Colleges (AAMC). In June 2012, we e-mailed the dean responsible for medical student education at each school, explaining the study and requesting contact information for the key person(s) responsible for professionalism remediation at the institution. We followed up by e-mail to the nonresponding deans one and two weeks after the initial e-mail.

Once the key person at a given school was identified, we e-mailed that person to explain the study and invite participation in a 30-minute telephone interview. No incentives were offered for participation.

Participants received the questionnaire at least 24 hours prior to their interviews. Each interview was conducted by one of two research assistants (A. E., K.J.), who had received three hours of training from one researcher (D.Z.). Interviews were audiotaped with participant consent and transcribed. Data collection occurred between June 2012 and April 2013. One interview included two participants; as these individuals were at the same institution and participated together, we combined their answers and considered them to be one respondent.

Data analysis

We analyzed data using a mixed-methods approach. Quantitative data were deidentified and loaded into IBM SPSS version 20 (IBM Corp., Armonk, New York). An impartial third party reviewed all data entries; after this review, basic descriptive analysis was performed.

One author (D.Z.) reviewed 10% of the interview recordings to ensure transcription accuracy. We loaded transcripts into Atlas.ti version 7

(Scientific Software Development GmbH, Corvallis, Oregon) for qualitative analysis. Our qualitative analysis was guided by procedures based on grounded theory: open coding, memo writing, comparative analysis, and theory building.²⁶ One author (D.L.) coded all transcripts for themes; however, throughout the coding and analysis process, we (D.Z., D.D., D.L.) discussed emerging results to minimize the effect of a single-analyst bias when interpreting data and determining results.

Because of the large amount of qualitative data obtained, we chose to focus our initial qualitative analysis on (a) the controversial issues revealed by the quantitative data—anonymous reporting and sharing concerns about struggling students (i.e., feeding forward)—to better understand those areas; and (b) on perceived system strengths and weaknesses because we thought those might be useful in developing best practices.

We (D.D., D.L., D.Z.) used Papadakis's²⁷ proposed categorization of professionalism lapses, which is based on four behavioral domains, to organize responses regarding the most common lapses. The four domains are:

- 1) Responsibility (e.g., late or absent for assigned activities, missing deadlines, unreliable);
- 2) Diminished capacity for self-improvement (e.g., arrogant, hostile or defensive);
- 3) Relationship with patients including communication with patients; and
- 4) Relationship with healthcare environment (e.g., testing irregularities, falsifying data or impaired communication with team).²⁷

Results

Participating medical schools

Ninety-three (60.8%) of the 153 eligible medical schools participated. Eighty-one of the 93 participating schools were in the United States (87.1% of sample; 59.6% of eligible U.S. schools), and 12 were in Canada (12.9% of sample; 70.6% of eligible Canadian schools). Participation rates differed slightly but not significantly by AAMC Group on Educational Affairs region: 28 schools were in the Northeast region (56.0% of Northeastern schools; 30.1% of sample); 27 were in the Southern region (54.0% of Southern schools; 29.0% of sample); 24 were in the Central region (68.6% of Central schools; 25.8% of sample); and 14 were

Table 1

Administrative Oversight of Remediation of Professionalism Lapses in Medical Students by Stage of Process, 93 U.S. and Canadian LCME-Accredited Medical Schools, 2012–2013 Study

Individual/committee	Oversight by stage, no. (%) of medical schools ^a				
	Is notified initially about lapse	Determines course of action after lapse	Devises remediation	Oversees remediation	Assesses outcome of remediation
Student affairs dean	69 (74.2)	54 (58.1)	46 (49.5)	48 (51.6)	45 (48.9)
Course or clerkship director	63 (67.7)	30 (32.3)	44 (47.3)	37 (39.8)	38 (41.3)
Medical education dean	19 (20.4)	26 (28.0)	17 (18.3)	19 (20.4)	16 (17.4)
Professionalism program director	5 (5.4)	8 (8.6)	9 (9.7)	10 (10.8)	9 (9.8)
Promotions committee	5 (5.4)	35 (37.6)	41 (44.1)	20 (21.5)	40 (43.5)
Honor court	4 (4.3)	9 (9.7)	9 (9.7)	6 (6.5)	6 (6.5)
Medical school dean	2 (2.2)	3 (3.2)	3 (3.2)	0 (0)	3 (3.2)
Other	6 (6.5)	9 (9.7)	12 (12.9)	9 (9.7)	11 (12.0)

Abbreviation: LCME indicates Liaison Committee on Medical Education.

^aThe total number of medical schools in each column is greater than the number of participating schools (n = 93) because some schools involved more than one administrator at each stage and/or had different system pathways depending on the student's progress through the medical education program (preclinical or clinical), the severity of the lapse, and/or the frequency of lapses. The denominator for percentage determination is 93, not the total number in each column.

in the Western region (77.8% of Western schools; 15.1% of sample). Participating schools' entering class sizes in academic year 2012–2013 ranged from 42 to 362 students, with most schools having between 100 and 200 students: 24 schools (25.8%) had entering classes of 100 to 149 students, and 32 schools (34.4%) had entering classes of 150 to 200 students.²⁸

Ninety schools completed the questionnaire during a telephone interview, whereas 3 completed the questionnaire in writing. A total of 66 schools (71.0%) responded to the three questions about common professionalism lapses.

Policies and oversight

More than three-quarters of the schools (n = 74; 79.6%) had written policies and procedures related to unprofessional medical student behavior. Table 1 reports the administrative individuals or committees—such as student affairs deans, course or clerkship directors, medical education deans, professionalism program directors, promotions committees, honor courts, and others—involved at each stage of the professionalism lapse reporting and remediation process. At many schools, multiple administrators were involved simultaneously, especially at the initial notification stage. Student affairs deans along with course or clerkship directors were responsible for the majority of oversight.

Identification of professionalism lapses

Schools used various approaches to identify professionalism lapses in medical students, including incident-based reporting, routine student evaluations, separate professionalism courses and evaluations, formal peer assessments, and anonymous reporting. An overview is provided in Table 2. For students in the clinical years, sources of information on professionalism lapses included faculty,

housestaff, other health care professionals, and patients and their families.

Respondents at half of the schools (n = 46/92; 50.0%) reported that their institutions had anonymous reporting systems (i.e., no information about reporter required). There were no statistically significant differences in the existence of anonymous reporting systems by geographic region

Table 2

Approaches Used to Identify Professionalism Lapses in Medical Students, by Phase of Medical School Curriculum, 93 U.S. and Canadian LCME-Accredited Medical Schools, 2012–2013 Study

Approach	Phase of curriculum	No. (%) of medical schools ^a
Incident-based reporting	Preclinical	82/93 (88.2)
	Clinical	82/89 (92.1)
Items on routine student evaluations	Preclinical: All courses	40/92 (43.0)
	Preclinical: Some courses	34/92 (36.6)
	Clinical: All courses/clerkships	88/90 (97.8)
	Clinical: Some courses/clerkships	2/90 (2.2)
Separate professionalism course and evaluation	Preclinical	14/91 (15.4)
	Clinical	14/88 (15.9)
Formal peer assessment	Preclinical	41/92 (44.6)
	Clinical	15/90 (16.7)
Anonymous reporting ^b	Preclinical and clinical	46/92 (50.0)

Abbreviation: LCME indicates Liaison Committee on Medical Education.

^aSome participating schools did not yet have students in the clinical years, so respondents at those newer schools could not respond to some questions. Also, not all respondents at other schools answered all questions.

^bAlthough respondents at half of the schools reported that their institutions had anonymous reporting systems, subsequent qualitative analysis suggested that some of these reporting systems were confidential rather than anonymous.

($\chi^2 = 3.67, P = .30$) or by entering class size ($\chi^2 = 3.25, P = .52$). Subsequent qualitative analysis suggested that some of these reporting systems were confidential (i.e., information about reporter required but kept confidential) rather than anonymous.

Common professionalism lapses in medical students

Although we did not ask for quantitative data on professionalism lapses, we did ask respondents for their perceptions of the three most common lapses at their institution. Respondents from 66 schools (71.0% of sample) provided 183 responses. Lapses in responsibility were the most common ($n = 102$; 55.7%). The behaviors cited most often in this category were missed deadlines, unexcused absences, and tardiness. Lapses in relationship with health care environment were the next most common ($n = 59$; 32.2%). The behaviors cited most often in this category were disrespectful communication (by e-mail or in person), inappropriate use of social media, and poor availability. Lapses related to diminished capacity for self-improvement were less common ($n = 18$; 9.8%); these behaviors consisted most often of lack of self-awareness (including of one's limitations), lack of initiative, and being defensive to feedback. Lapses in relationship with patients were rarely cited ($n = 4$; 2.2%).

In addition, some respondents reported lapses considered grounds for dismissal—as opposed to remediation—at their schools, including cheating on an exam (some schools did remediate this behavior), committing a felony, falsifying patient information or residency application information, forging prescriptions, or committing additional offenses after an initial lapse.

Remediation strategies

Respondents at 90 schools reported that their institutions generally used a combination of strategies to remediate professionalism lapses (see Table 3). Remediation assignments, used by 66 schools (73.3%), directed the student to read and write broadly about professionalism or focused on the student's lapse. Examples of assignments included reflective writing or directed reading, a literature review with a research paper or presentation, or

Table 3

Strategies for Remediation of Professionalism Lapses in Medical Students, U.S. and Canadian LCME-Accredited Medical Schools, 2012–2013 Study

Strategy	Medical schools, no. (% of 90) ^a
Mandated mental health evaluation/treatment	74 (82.2)
Remediation curriculum or assignment	66 (73.3)
Mandated professionalism mentor	66 (73.3)
Stress management counseling	65 (72.2)
Repeat part/all of course/clerkship	59 (64.8)
Community service	15 (16.6)
Other	4 (4.4)

Abbreviation: LCME indicates Liaison Committee on Medical Education.

^aRespondents at 3 of the 93 participating schools were not able to respond because these newer schools had not yet remediated any professionalism lapses in students.

attending hospital ethics or state medical board disciplinary committee meetings.

Students were sometimes issued a set of behavioral standards or required to sign a remediation contract to explicitly acknowledge behavioral expectations and consequences of violations. Remediation was sometimes accompanied by probation, which could be noted in a dean's letter.

Mandated professionalism mentoring was employed at 66 schools (73.3%). Mentors included deans, faculty members, advisors, or course directors. Mentor–mentee meeting frequency was individualized depending on the situation; the number of follow-up meetings varied from three to weekly for the duration of medical school. In addition to meeting with the mentor, students were usually required to complete remediation assignments as described above. At 59 schools (64.8%), students were required to repeat part or all of a course or clerkship when professionalism objectives were not met.

Seventy-four schools (82.2%) mandated mental health evaluation/treatment and 65 schools (72.2%) required stress management counseling when it was determined that students needed that. Fifteen schools (16.6%) mandated community service; a number of respondents cited community organizations' reluctance to accept mandated students.

Feedforward practices

To understand how schools identify patterns of unprofessional behavior,

we asked whether information about a student with professionalism difficulties was made available to future supervisors (i.e., feedforward practices). Such information was shared at 49 schools (52.7%), whereas it was not at 39 schools (41.9%). At 5 schools (5.4%), decisions regarding forward notification depended on the student's stage of training and/or the type of lapse. There were no statistically significant differences in feedforward practices among schools by geographic region ($\chi^2 = 5.83, P = .44$) or by entering class size ($\chi^2 = 7.19, P = .52$).

Qualitative analysis of responses about feedforward practices revealed eight themes, reflecting the complexity of decision making surrounding these practices: (1) feeding forward only when certain criteria are met, (2) using feedforward mechanisms to support student learning, (3) feeding forward informally during meetings, (4) worry about creating biases, (5) feeding forward to residency programs, (6) struggles with feedforward policies, (7) deciding not to feed information forward, and (8) legal issues regarding feedforward policies.

Respondents at 20 schools (21.5%) reported that their institutions only feed information forward about professionalism offenses in certain instances. Some schools had formal policies for when to feed information forward; these policies often involved a written note system for formal documentation. Other schools left it to the discretion of the administrator(s) overseeing remediation to determine whether the severity of the offense required feeding forward or whether

feeding forward would serve the education and growth of the student. One respondent explained:

[Previously problematic] behavior is tracked between clerkships. That information is passed onto the next clerkship. “John Doe struggled with such and such, place him with a strong mentor.” In a supportive, not [punitive] way. It’s more of, how can we put him with a good role model who will give him feedback early and continue the [supportive] environment?

Respondents indicated that feeding forward commonly occurred in informal circumstances, such as during regular meetings of clerkship directors. This practice was related to the theme of using information about lapses to support student learning because informal sharing may be a way to prepare future clerkship directors to provide additional assistance to students who may need it.

Some respondents mentioned the care taken in deciding whether to feed information forward due to worry about creating biases. For this reason, some respondents reported that information about lapses was restricted at their schools to individuals not directly supervising or grading students. Other respondents reported that this concern led to policies against feeding forward at their institutions. One respondent stated:

This is a delicate problem if somebody has professionalism difficulties. We think it’s probably not a good idea. Somebody having academic difficulties, that information gets passed forward. But somebody having professionalism problems, we try to have a clean slate going on to another clerkship.

Worry about biases was also related to feeding information forward to residency programs. Many respondents reported that their schools did not include professionalism offenses in information sent to residency programs unless the offenses were egregious or unresolved.

A few respondents discussed struggles with feedforward policies. One respondent boiled it down to an issue of responsibility:

We talked about [whether to feed forward] and, rightly or wrongly, we’ve come together and said you know, our real responsibility is to the people of [this state] to which these individuals may one day be their doctors.

Although respondents at 39 schools indicated that information about professionalism lapses was not fed forward at their institutions, the qualitative analysis revealed that information was shared through informal mechanisms at most of these schools. Only a few respondents indicated that under no circumstances was information fed forward about professionalism offenses at their schools.

With regard to legal considerations, one school got legal approval before instituting a feedforward policy. Another school was working to navigate privacy legislation so that information could be fed forward to residency programs.

Faculty responsibility and training

Faculty at most schools were expected to play an integral role in identifying and addressing professionalism lapses in medical students, according to respondents. Twenty-seven schools (29.0%) had a formal policy that faculty should address professionalism lapses directly with students, and 60 schools (64.5%) had an expectation that this should occur. However, fewer than one-half of the schools ($n = 32$; 42.4%) had a formal program to prepare faculty for this role. Much of the training offered was described as optional and not robust (e.g., annual seminar on professionalism). A few respondents noted that their schools had infused professionalism education throughout the medical school curriculum; those schools had structured faculty development programs.

Determination of remediation success

Many respondents felt that criteria for successful remediation were not clearly defined at their schools. Success was determined by a variety of people, including direct supervisors, student affairs deans, professionalism mentors, and/or promotions committees, depending on the school and the type of lapse. Respondents at schools that issued behavioral contracts felt that success could be determined by the student’s adherence to stated expectations.

Strengths and weaknesses of remediation processes

Respondents were asked to identify what they thought was working well and not working well with their schools’ strategies for assessing and remediating professionalism lapses in medical students.

The four most common themes identified as strengths were catching minor offenses early to help students before problems escalate, emphasizing professionalism schoolwide, focusing on helping students rather than punishing them, and ensuring transparency and good communication. (Representative quotations for these and additional themes regarding strengths—including multiple sources of input, personal relationships, culture that encourages reporting of offenses, and feeding forward—are presented in Supplemental Digital Table 1 at <http://links.lww.com/ACADMED/A279>.)

Many schools concerned with catching minor offenses early employed a variant of the University of California, San Francisco, School of Medicine’s Physicianship Evaluation system.^{10,29} Use of such a system of routine reporting dovetailed with a school culture described as supportive and corrective, rather than punitive, toward students who lapsed. One respondent explained:

Most critical is to understand that these are young people who need professional development and not punishment. They are not professionals yet. They are training to be professionals. Sometimes students don’t understand how to act in the culture of a hospital [and may be] stressed out, tired and worried about grades and they sometimes do things in the heat of the moment that they normally wouldn’t do.

Many respondents noted that transparent policies, including clear professionalism expectations and consequences for lapses, were imperative to ensure that students understood the importance of professionalism immediately and for their future careers.

Many weaknesses were related inversely to strengths. Four of the major themes identified as weaknesses were reluctance to report (among both students and faculty), lack of faculty training, unclear policies, and ineffective remediation. (Representative quotations from these and other themes—including lack of faculty accountability, lack of broad involvement, challenge to emphasize professionalism, and mentor-related challenges—are available in Supplemental Digital Table 2 at <http://links.lww.com/ACADMED/A279>.)

Reluctance to report lapses—typically attributed to a faculty member being

worried about harming a student's future or feeling uncomfortable confronting a student—was described as interfering with early identification of problem behaviors. Many respondents felt that reluctance to report could be overcome with better faculty training, which was another system weakness. However, several respondents noted that training clinical faculty with high turnover was challenging. Respondents believed that some faculty reluctance to report could also be overcome with clearer policies, such as policies with more detailed explanations of expectations for professional behaviors rather than broad generalizations. Remediation was thought by some respondents to be ineffective for students with certain personality traits.

Discussion

Interest in professionalism education, assessment, remediation, and research has burgeoned over the last three decades.³⁰ However, our findings indicate much variability in how schools are meeting the LCME standard for medical student professional development.²² There is growing acceptance that “consistently exhibiting behaviors that reflect professional values requires sophisticated competencies that can and must be taught and refined over a lifetime of practice.”⁹ This professional development cannot be truly accomplished without appropriate assessment, feedback, and, when necessary, remediation.

To the best of our knowledge, our study is the first to systematically explore medical schools' professionalism remediation practices. Mechanisms for identifying and reporting lapses differed greatly among schools. Student affairs deans and course or clerkship directors were responsible for addressing the majority of lapses. Some schools relied on few identification strategies, whereas others had more elaborate mechanisms including telephone and Web-based systems for anonymous or confidential reporting, surveys, and routine student evaluations. All of these mechanisms are potentially flawed by differing conceptions of professionalism and reluctance to report. These factors compound the previously reported failure of clinical supervisors to fail underperforming trainees.³¹ Peer assessment, despite its merits,³² was used by fewer than one-half of schools participating in our study during preclinical training

and rarely during clinical training. Many respondents identified emphasizing professionalism schoolwide as key to a successful professionalism system, similar to findings reported in studies in clinical practice environments.^{33,34}

Encouragingly, most medical student professionalism lapses appear to be minor. Lapses in responsibility were the type most commonly cited by our respondents, similar to findings of previous work.^{35,36} Respondents struggled to balance the need to consider the individual context of each lapse and its corresponding remediation with the need to have a systematic process for addressing lapses. Many respondents identified addressing minor lapses early as important in helping struggling students understand how their behavior connects to the professional ideals of medicine. Respondents reported that their schools used numerous remediation practices, including reflective writing and meetings with a professionalism mentor, to help students make this linkage. The frequent use of strategies to address possible mental health issues is not surprising considering the high rates of depression, anxiety, and burnout among medical students.^{37–39} Because of the complicated and individualized nature of professionalism lapses and remediation, most schools used nuanced approaches to feeding this information forward rather than adopting across-the-board feedforward policies, which is consistent with previous research.^{40–43}

On the basis of our findings, we suggest the following next steps:

1. Create an online repository of examples of remediation policies and procedures, behavioral contracts, and remediation assignments. This would allow faculty, staff, and students to review and share successful practices and build on existing resources.
2. Provide faculty with training to enhance their skills and knowledge in addressing professionalism lapses and to encourage early reporting.
3. Conduct additional research to clarify factors contributing to underreporting so that these factors can be addressed.
4. Explore the risks and benefits of feeding information forward given that fragmented supervision of students makes it difficult to discern

patterns of behavior without sharing such information.

5. Conduct long-term studies of the effectiveness of identification and remediation strategies as measured through student outcomes.

Several limitations of our study must be noted. First, although our response rate was better than that of many comparable studies,⁴⁴ this study may be subject to sampling bias, including voluntary response and nonresponse biases. The former may have led to inclusion of schools more interested in professionalism; the latter may have led to the collection of data that reflect schools most active in professionalism reporting and remediation. Second, though we attempted to minimize the effect of “undercoverage” by considering school region and entering class size, the sample may not reflect all U.S. and Canadian LCME-accredited medical schools. Third, the complexity of the remediation process and the wording of some of our questions may have led to confusion among respondents given their variable levels of expertise. Finally, our findings may not be generalizable internationally because the study was limited to U.S. and Canadian schools.

Despite these limitations, our study has notable strengths. We gathered previously undocumented information regarding current practices used to identify and remediate professionalism lapses in medical students which can be used to inform further discussion. Schools can use the themes identified as strengths as the basis for developing remediation policies and procedures to address “minor” issues in a supportive environment and to develop essential training for faculty. This can transform faculty reluctance to report lapses to a positive approach focused on enhancing students' formation of professional identity. In addition, with increasing diversity of students, faculty, and staff as well as greater dispersion of educational sites, clear and open communication about professionalism expectations and norms is essential. The above-mentioned strategies could contribute to formulating best practices in medical student professionalism remediation. Finally, this study can provide a much-needed road map for future research and serve as the foundation for developing more

consistent practices for professionalism reporting and remediation.

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