A Professional Development Course for the Clinical Clerkships: Developing a Student-Centered Curriculum

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INTRODUCTION: Although professional development is addressed throughout the medical school curriculum, it is particularly salient to third-year students as they become integral members of health care teams.

AIM: We present a professional development curriculum for third-year medical students.

SETTING: Urban medical school.

PROGRAM DESCRIPTION: In 2005, our curriculum consisted of 3 large group panels, each followed by a small group, occurring after the first, third, and last clerkship. Before each small group, students prepared critical incident reports, which led to focused group reflection. The individual topics were, respectively: (1) transition to clerkship learning; (2) challenges to professional behavior; and (3) medical errors. In 2006, based on student feedback, we piloted a revised student-centered panel on professionalism that was based entirely on themes from students' critical incident reports.

PROGRAM EVALUATION: Students rated the curriculum well overall. In 2005–2006, the small groups ranged from 3.95 to 3.98 (SD 0.88) on a 5-point Likert scale (1 = poor, 5 = excellent) and the panels ranged from 3.54 to 4.41 (SD 0.9). The pilot panel in 2006 was rated 4.38 (SD 0.80). The most common professionalism themes generated from 185 critical incident reports were communication, compassionate patient care, accountability, and team collaboration.

DISCUSSION: A professional development curriculum, consisting of panels, small groups, and critical incident reports, can promote reflection among third-year medical students.

KEY WORDS: medical school curriculum; third-year medical students; professional development; evaluation.

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INTRODUCTION/AIMS

Medical educators,¹ students,² and the Liaison Committee of Medical Education³ have advocated for formal curricula on professional development, and 90% of U.S. medical school deans have reported a need for teaching materials on professional development.⁴ Professional competence has been defined as “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and the community being served”.¹ The third year of medical school is the first time medical students are immersed full-time in clinical activities, thus constantly observing and modeling the work that constitutes the heart of professional competence for a physician. We believe, therefore, that the clerkship year is a critical period in students' professional development. It is thus concerning that declines in idealism⁵ and empathy for patients⁶ have been reported to occur during the third year. To promote professional development, we developed a longitudinal curriculum for the third-year clerkship students.

Personal reflection is a common modality for fostering the professional development of medical students.⁷ Within small discussion groups, students may reflect on vignettes depicting professional behaviors,^{8,9} or on material such as film or literature that captures the broader context of medicine.¹⁰ Critical incident reports—narrative accounts in which learners write about their own memorable and influential learning experiences—are commonly used to prompt students to reflect on their personal clinical experiences.^{11,12} At Harvard, third-year students write critical incident reports and discuss them in small groups within their clerkships,¹² whereas at Indiana University, students write critical incident reports as part of an online journal.¹³ Discussing critical incident reports one on one with faculty has been shown to be an effective approach to promoting professional development on an emergency medicine rotation.¹⁴ The reports are also used as a foundation for promoting positive interpretations of specific clinical experiences^{15,16} and as a method of providing productive coping strategies for students.¹¹

At the University of California, San Francisco (UCSF), critical incident reports are the foundation of our third-year professional development curriculum. In this report, we describe: (1) a professional development curriculum that includes small and large group sessions, and (2) the modification of a panel on professional behavior based on themes generated from student-written incident reports.

RESULTS

Description: Phase 1 Curriculum (2005–2006 Academic Year)

The professional development curriculum in the third year at UCSF occurs during 3 required “Intersessions,” week-long units of classroom time that occur after the first, third, and sixth (final) clinical clerkships. The focus of the longitudinal Intersessions course is to provide formal classroom training on cross-disciplinary topics, such as clinical decision making, health policy, medical ethics, and translational science.

During each of the 3 weeks, the professional development curriculum was delivered during a 90-minute panel followed by a 2-hour small group, for a total of 10.5 classroom hours over the year (Table 1). The topics for the panels, based on the students’ developmental stage in their clerkships, were:

- 1) Transitioning from didactic classroom-style to clerkship- and apprenticeship-style learning (after first clerkship);
- 2) Responding to challenges in professional behavior (after third clerkship);
- 3) Making and reflecting on medical errors (after last clerkship).

On each panel, 3 to 4 physicians discussed a personal experience related to the topic. A moderator encouraged questions from the students and reflection among the panelists. Attendance was required of the entire class, which included approximately 150 students.

Small groups followed each panel, consisting of 6 students and 1 to 2 faculty facilitators well-known to the students from a preclinical physicianship course. The discussion focus was the students’ personal critical incident reports. These reports, 1 to 2 pages long, were written before the small group session. The 3 topics for the critical incident reports, by Intersession week, were:

- 1) A clerkship experience that had significantly shaped the student’s view of him/herself as a professional—positive, negative, or mixed;
- 2) An instance of 1 exemplary and 1 unprofessional behavior the student had witnessed;

- 3) A mistake in the care of a patient, the student’s response, the team’s response, and the impact of this experience on the student.

Facilitators encouraged personal reflection on each student’s experience and guided discussion toward skills important for navigating professional challenges. Because the reports contained personal information and were primarily intended for use in the small groups, submission to the course directors was not required.

Evaluation: Phase 1 Curriculum (2005–2006)

On a 5-point Likert scale (1=poor and 5=excellent), students rated the 3 panels between 3.54 and 4.41 (SD 0.9). The small groups were rated 3.95 to 3.98 (SD 0.88), comparable with other cross-disciplinary small groups in Intersession.

Student feedback from the second panel on professionalism indicated that although they found the panelists’ own stories about professional challenges moving, they desired practical suggestions on how to address these situations. Therefore, although the panel was rated highly in 2005–2006, we decided to redesign the second panel in the following year to better reflect student experiences and to promote skill development. Phase 2 describes our modification of this panel, culminating in a restructured panel on professional behavior.

Description: Phase 2 Curriculum (2006–2007)

Our first step was to review the students’ critical incident reports from the previous year’s (2005–2006) second Intersession. Using an iterative consensus building process,¹⁷ we identified themes of exemplary and unprofessional behavior. Students volunteered to submit their critical incident reports to their small group leaders. A total of 185 reports (78 of 148 students in 2005–2006 and 107 of 159 students in 2006–2007) were submitted and reviewed, for an overall 60% submission rate. After an initial set of themes was developed, each report was coded by at least 2 investigators. Discrepancies were resolved through discussion. More than 1 theme could be coded for each critical incident report. The most

Table 1. The Professional Development Curriculum in the Third Year at UCSF School of Medicine

	Intersession 1	Intersession 2	Intersession 3
Timing	After first required clerkship	After third required clerkship	After sixth (final) required clerkship
Panel Title	Embracing Clerkship Learning Panel: Challenges, Frustrations, and Strategies	Professionalism Panel: Promoting Professionalism Within Our Institution	Medical Mistakes Panel: Reflections from Senior Faculty
Panelists	Senior medical students	Faculty from diverse specialties	Faculty from diverse specialties
Panel Format	Panelists disclose a challenging educational event in their third- year and the lessons they learned	Panelists respond to vignettes demonstrating themes distilled from student critical incident reports	Panelists disclose a personal medical error and how they responded to this event
Small Group Topic	Transitioning to Clerkship Learning	Promoting Professionalism within Our Institution	Making Medical Mistakes
Sample Small group objectives	Describe how your learning style has been affected by your “apprenticeship” role during clerkships Brainstorm strategies for maximizing educational opportunities in clerkship settings	Demonstrate the ability to reflect on situations in which unprofessional behavior occurs, considering the perspectives of health care professionals, patients and learners Engage in discussion about exemplary behavior and how it influences teams	Identify the impact of errors on patients, their families, other staff members, as well as on the person who has made a mistake Describe different approaches for informing patients of mistakes that have occurred in their care

The sessions are part of 3 required “Intersessions,” week-long units of classroom sessions on cross-disciplinary topics

common themes for both exemplary and unprofessional behaviors were related to the impact of communication and team work on patient care. Table 2 presents counts and examples for each theme.

Our second step was to develop case vignettes that represented the most common themes in the critical incident reports. These were then presented to a panel of multidisciplinary physicians. In this redesigned panel, the panelists were asked

Table 2. Themes of Exemplary Behaviors and Professional Challenges from Critical Incident Reports*

		Examples	Sample Quotations
Themes Describing Exemplary Professionalism	Communication with patients (n=90)	Supervising physician demonstrates outstanding patient communication (information=sharing, displaying appropriate empathy and compassion)	"[The resident] took the time to explain the bad news... what struck me most was the balance that she was able to give in terms of allowing the family their own time to digest... and really then support[ing] them as best she could."
	Accountability (n=50)	Supervising physician maintains high standards for patient care and well-being, in accordance with his/her professional responsibilities	"An elderly woman came in for [a procedure]... the patient was clearly demented. Knowing that...this elderly patient clearly did not have the capacity to understand risks, benefits, and alternatives, the physician felt she could not proceed... She called the nursing home immediately to find out if this patient had a...surrogate decision-maker... The doctor planned to schedule a follow-up appointment for her only when the details of her competency and the responsibility for decisions regarding her health care were established."
	Teamwork (n=34)	A high level of respect or communication within or between teams	"On my OB rotation, one of the attendings instigated daily meetings... during which time all the... attendings, midwives, and all the floor nurses would be gathered in one room together to review fetal heart monitor strips. This was ostensibly to help everyone practice their skills... but it also served as an informal forum for cross-discipline discussion of tough cases, scary moments, and... feedback."
	Dedication to teaching (n=30)	Supervising physician transmits knowledge effectively in a clinical setting	"[This attending] always made time to completely and professionally fulfill his role as the team teacher... If I didn't know an answer, he would slow down and help me reason it out, one step at a time."
	Respect for patients (n=19)	Supervising physician shows exceptional respect toward patients	"The attending paid attention to cultural beliefs and customs and brought them into the situation in a way that would reassure the patient. Most importantly, the attending took herself out of her normal workday to truly address this patient and her needs respectfully, with time, patience, and serenity."
Themes Describing Challenges to Professionalism	Compromised compassionate care (n=67)	Team makes fun of a difficult patient or applauds his/her discharge	"The presenter was discussing a patient... Someone then made a comment making fun of [the patient's] weight, and... the whole room was filled with laughter and other inappropriate comments aimed at obese people."
	Poor teamwork (n=65)	Poor communication or little respect within or between teams	"A particular resident... hated how an attending ran rounds. During rounds, in front of patients, he would roll his eyes at other members of the team to let them know that he was frustrated with the attending."
	Poor patient communication (n=45)	Supervising physician transmits information poorly or displays a lack of empathy or compassion	"There was a child who... had almost constant seizures. We started the patient on a medication to help control his seizures. [His relative] complained that we had 'drugged him' and that he was not 'as responsive as usual.' When I asked the patient's physician if [the relative] understood the seriousness of the child's illness, the physician said, 'I don't know. I think someone talked to her but maybe not.'"
	Lack of Accountability (n=42)	Supervising physician does not fulfill the minimum expectations of his/her position	"I saw a patient who was suffering from chronic pain. The doctors in the ED referred to her as a 'frequent flier' and refused to admit her. Although I believed she was truly in excruciating pain, some of the doctors I worked with felt she was exaggerating or malingering... In the end, the patient was diagnosed with [cancer]."

* Sample quotes have been modified to protect the identity of the participants

to give their perspectives on each vignette. A senior faculty member well-known to the students from their preclinical years moderated; the panelists included 3 faculty members and 1 resident physician from different specialties. The moderator also probed the panelists to discuss the role of the medical school, clinical institution, and the students themselves in addressing these professional challenges. The students were encouraged to ask questions and to challenge the responses of the panelists. Finally, panelists and audience members discussed potential solutions and skills that might address the dilemmas presented in the vignettes. The following are abridged examples of the case vignettes that were presented:

Your team starts cheering because they “won the game” and discharged all the patients on the team. You wonder, “Is this what I went into medicine to do?” (Compromised compassionate care)

Your patient tells you he is still in horrible pain from his pancreatitis. Your attending says alcoholics always exaggerate their pain. (Accountability)

You examine a patient and decide to implement the management plan suggested by your resident. You later present the patient to your intern, who scoffs at the resident’s approach, and asks you to manage the patient differently. (Poor teamwork)

Evaluation: Phase 2 Curriculum (2006–2007)

The revamped professionalism panel with case vignettes was successful by qualitative comments and quantitative report (4.38, SD 0.8). Qualitative evaluations showed a prominent difference compared to the previous year. After the previous year’s panel, a small number of students expressed that they still felt unaware of the institutional systems that addressed unprofessional behavior involving their supervising physicians; they also expressed a desire to learn skills to address similar situations in the future. After the 2006–2007 revised panel, these concerns were absent from informal feedback and formal evaluations.

DISCUSSION

Professional development is of great importance throughout the third-year clerkships. Our third-year professional development curriculum relied on students’ clinical experiences, in the form of critical incident reports, to serve as the basis of small group discussion. In addition, we used themes from students’ reports to develop the content for a large group panel for the entire class. The result was a well-rated, student-centered curriculum in which reflection was a central theme.

We believe that writing and discussing positive and negative critical incidents promotes awareness and intentionality in how a student learns the process of working within teams and caring for patients. Professional learning theorist Donald Schön emphasized that optimal professional development requires reflection-on-action—learning that occurs through retrospective analysis of one’s personal actions during a salient event.¹⁸ While attending physicians may ask students

to reflect on a procedure they just performed or the clinical reasoning they applied while interviewing a patient, it is less common to reflect on interpersonal processes related to patient and team interactions. Jones recommends that students evaluate the attitudes, values, and behaviors they observe in preceptors—“intentional modeling”—so that they can actively choose qualities to emulate.¹⁹ Our small group discussion on exemplary behavior may promote such intentional modeling. Critical incident reports have also been suggested as a valuable way for students to work through conflicts that they encounter in acculturating to many different specialty and team expectations during the third year²⁰.

One strength of our curriculum is the “student-centeredness” of both small and large groups, with coursework composed of realistic examples from student experience. The panels encouraged reflection on the shared experiences that were presented in the case vignettes. The large group setting allowed the panelists to highlight the institution’s existing systems for promoting a professional climate. The panelists emphasized practical skills that students could use in dealing with similar situations. In addition, they represented the perspectives of diverse specialties, and modeled cross-disciplinary professional interactions and problem solving. They helped to contextualize the students’ professionalism dilemmas through their depth of knowledge and experience, which ultimately helped students understand their own experiences with more subtlety and depth of insight.

The thematic analysis of the students’ critical incident reports sheds light on our school’s informal curriculum, providing a valuable tool for us to continually update our professional development curricula. Wagner suggests that students’ perceptions of professionalism are distinct from that of residents and faculty members,²¹ emphasizing the need for such tools. Notably, in both our students’ exemplary and unprofessional categories, the underlying issues were similar—patient care and team collaboration. The themes in our students’ critical incident reports support the necessity of addressing the informal curriculum.

There are a number of limitations to our curriculum. Although we believe that having a formal curriculum separate from the clerkships provided students some important distance from which to reflect on their clinical experiences, we also recognize that some professional issues are best discussed during clerkships when they are more immediate. We also recognize that many schools do not have designated classroom curricula in the third year. Whereas the panels could easily be adapted to larger or smaller class size, the small groups require considerable faculty numbers and may strain a school’s faculty and classroom availability. The voluntary nature of submitting the critical incident reports to course directors may have biased the content, although the response rate was good. The quantitative ratings of the Inter-session panels and small groups may not reflect the full impact of the curriculum. We also cannot comment on the impact of this professional development curriculum on actual outcomes of professional behavior in the clinical setting or beyond.

In conclusion, we have developed a curriculum that focuses on third-year medical students’ experiences and promotes reflection with peers and educators. We have used critical incident reports to modify the curriculum so that it remains relevant to students. By reviewing themes in the reports, we learned that students were deeply affected by both exemplary and inadequate physician modeling of communication, ac-

countability, and respect for patients and other health care workers. Leaders of medical schools, academic health centers, and residency programs should be aware of the potential impact of physician behavior on students, and should partner to identify ways to enhance the professional climate.

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