Palliative Medicine Death Rounds: Small Group Learning on a Vital Subject

Article *in* The American journal of hospice & palliative care · December 2009

DOI: 10.1177/1049909108322296 · Source: PubMed

5 authors, including:

Judith Kitzes
University of New Mexico
16 PUBLICATIONS **279** CITATIONS

SEE PROFILE

Summers Kalishman
University of New Mexico
87 PUBLICATIONS **2,363** CITATIONS

SEE PROFILE

Darra Kingsley
University of New Mexico
5 PUBLICATIONS **98** CITATIONS

SEE PROFILE

Elizabeth Lawrence
University of New Mexico
5 PUBLICATIONS **26** CITATIONS

SEE PROFILE

Palliative Medicine Death Rounds: Small Group Learning on a Vital Subject

Judith A. Kitzes, Summers Kalishman, Darra D. Kingsley, Jan Mines and Elizabeth Lawrence

AM J HOSP PALLIAT CARE 2009 25: 483
DOI: 10.1177/1049909108322296

American Journal of Hospice & Palliative Medicine®
Volume 25 Number 6
December/January 2009 483-491

10.1177/1049909108322296
http://ajhpm.sagepub.com
hosted at
http://online.sagepub.com

Palliative Medicine Death Rounds: Small Group Learning on a Vital Subject

Judith A. Kitzes, MD, MPH, Summers Kalishman, PhD, Darra D. Kingsley, MD, Jan Mines, MA, and Elizabeth Lawrence, MD

Background. The medical student's experience with patients' dying and death has profound impact on personal and professional development. Death Rounds at the University of New Mexico School of Medicine is a small group educational model that promotes student self-reflection, metacognition, professional growth, and collegial support.
Objective. To describe the implementation and evaluation activities of a third year clerkship Death Rounds which are a structured, institutionally supported resource for helping students to understand the clinical, ethical, legal, professional, cultural, and spiritual aspects of death.
Design. Medical students attend 2 to 3 small group palliative medicine Death Rounds sessions, facilitated by the attending clerkship director, chief residents, and a palliative care physician.
Conclusions. The students' assessment of their palliative medicine knowledge and skills in 5 categories before and after participation in Death Rounds rated their skills after Death Rounds higher with effect sizes ranging from 0.9 to 1.9. Evidence from both the Death Rounds Questionnaire and Facilitators' Logs demonstrates that multiple issues and topics were addressed and all associated with the School of Medicine's 6 core competencies. Death Rounds minimally affect on clerkship time and faculty resources.

Keywords: palliative medicine; medical education; professional development

Background

In 2007, Palliative Medicine became a recognized medical subspecialty in the United States.[1] Since 1996, many national accrediting organizations including the Liaison Committee on Medical Education (LCME), the Accreditation Council for Graduate Medical Education (ACGME), the National Board of Medical Examiners (NBME), and the American Board of Internal Medicine (ABIM), have mandated a palliative medicine curriculum for medical schools.[2-5] Systematic reviews of palliative medicine curricula in medical schools document diverse, nonstandardized formats to incorporate this subspecialty's principles and evidence-based data into the preclinical years.[6-9] Mandatory and elective clinical rotations expose the students to authentic clinical palliative medicine experiences. These rotations may include time spent caring for hospitalized patients who are dying and/or time spent in special settings such as in-patient palliative care units, home and freestanding hospice environments, home visitations, and nursing homes.[10-13]

In spite of this increased attention to palliative medicine, the 2007 Association of American Medical Colleges Graduate Questionnaire Report showed 20% to 23% of graduating medical students considered their palliative care, pain management, and end-of-life care training to be inadequate.[14] In addition,

From the School of Medicine, University of New Mexico, Albuquerque, New Mexico.

Address correspondence to: Judith A. Kitzes, Palliative Care Section, MSC 11 6020, 1 University of New Mexico, Albuquerque, NM 87131-0001; phone: (505) 272-4868; e-mail: Jkitzes@salud.unm.edu.

a clerkship's informal or hidden curriculum can negatively override formal educational activities in end-of-life care, especially in the areas of giving bad news, pain management, obtaining advanced directives, and interdisciplinary team work.[15,16]

The medical literature reveals that practicing physicians experience intense reactions and stress responses to patient deaths.[17] Distressing emotions related to caring for dying patients often go unrecognized, and these unexpressed emotions can negatively affect patient care and the personal lives of physicians.[18] Physicians note a lack of collegial support to help them cope with patient deaths.[19] Third year medical students also report intense and frightening emotional reactions to their "most memorable" patient deaths during their clinical clerkships. Students feel inadequately supported. Many students express the desire to debrief and to honor the dying process.[20-22]

To date, 2 programs at 2 different institutions have implemented small group sessions focused directly on the biopsychosocial approach to dying and death, one in the third year of medical school and the other in an intensive care unit (ICU) residency training program. These small group sessions differ from traditional morbidity and mortality rounds by encompassing a palliative medicine approach in a protected learning environment. This approach includes the biomedical, clinical, spiritual, social, and psychological domains. In a small peer group with supportive facilitators, the learners are encouraged to reflect on the impact of the dying process and death on themselves, the provider team, and the family involved.[12,23] Actively engaging learners in self-reflection, as well as consolation of colleagues who care for patients at the end of life, has been associated with transformative educational learning and improved attitudes toward care of the dying.[24,25]

In 2004, the University of New Mexico School of Medicine (UNM SOM) implemented an evolving 4-year integrated palliative medicine curriculum embracing the school's designated 6 core competencies: Medical Knowledge, Integration and Critical Reasoning, Patient Care, Interpersonal and Communication Skills, Professionalism, Ethics and Self-assessment, Community and Systems-based Practice (Appendix A). One element of this curriculum includes several clinical clerkship Death Rounds that focus on "memorable deaths" in medical school. This article provides a description of the implementation and evaluation of Death Rounds as a small group educational model that promotes student self-reflection, metacognition, professional growth, and collegial support.

Description of Evolving Integrated Palliative Medicine Curriculum

The evolution of a comprehensive palliative care curriculum at the School of Medicine (SOM) began in 2004. Many departments at the medical school worked collaboratively to integrate disciplines that crossed the 4 years, such as ethics, geriatrics, cultural competence, behavioral health, communication skills, pain management, care for special populations, and public health. This multidisciplinary approach increased the sustainability of the palliative care curriculum.[26]

As of 2007, 7 h of palliative care interactive lectures, 4 problem-based learning tutorials, and 7.5 h of an elective small group session called "Care Beyond Cure" are incorporated into the 21-month preclerkship curriculum. During the 12 months of required clinical clerkships, the surgical and medical rotations now include orientation sessions on ethical dilemmas in end-of-life decision making and a palliative medicine approach to death and dying, as well as 2 separate 1 h Death Rounds sessions. Death Rounds were also piloted in the pediatrics and obstetrics/gynecology clerkship, but were not sustained due to the loss of faculty champions. In the fourth year, students may take elective rotations in geriatrics, palliative medicine, or hospice.

Description of Death Rounds

Death Rounds is a structured, small group palliative medicine session for the third year medical student. It is facilitated by the clerkship director, chief residents, attending physicians, and/or a palliative medicine physician. At minimum, a palliative medicine physician and clerkship director are present with 7 to 15 students. The format is modeled on the biopsychosocial rounds described in "An integrated biopsychosocial approach to palliative care training of medical students."[12] As part of each session, students present memorable deaths experienced in medical school to their clerkship peers, and are given the opportunity to describe a palliative medicine situation with personal significance. Prior to the Death Rounds sessions, guidelines are given to the

students, emphasizing a brief clinical presentation followed by the student's self-identified palliative medicine challenges and perspectives (Appendix B).

The number of students who present during each Death Rounds varies with the complexity of the cases presented. In the presentation, a student will share enough clinical background about the patient who died to explain critical clinical, ethical, or palliative medicine decision points that unfolded in the actual care of that patient. Each case is discussed by the entire group, and an attempt is made to address the challenges faced by the student and the health care team. The facilitators do not identify the palliative medicine learning issues; however, they assist the presenting student in clarifying their issues by asking open-ended questions.[27]

The format, guidelines, and name for Death Rounds were widely discussed with the Senior Associate Dean of Education, Associate Dean of Undergraduate Medical Education, Medical Educators Scholars Group, Directors of the Professionalism and Ethics Program, and all of the core clerkship directors. Students were notified during clerkship orientations and were reminded again at Death Rounds that all the discussions were confidential. Although some students and educators were initially surprised by the bluntness of the term "Death Rounds," we believed that the use of this name set the tone for the kind of candid, honest discussions we were encouraging.

Methods

We used 2 tools to assess Death Rounds: a post Death Rounds Questionnaire and a Facilitators' Log of observed student learning issues. The questionnaire was developed based on findings reported by Rhodes-Kropf et al 2005 about medical students' reactions to their most memorable deaths.[20] Specifically, we surveyed the students about which adjectives best describe their most recent death, with whom they discussed these deaths, their level of comfort with death, the value of Death Rounds, learning issues they encountered and how they addressed them, and their assessment of their palliative medicine skills before and after participation in Death Rounds.

The palliative medicine physician facilitator listened to all the student-generated learning topics that arose during the sessions and generated a log compiled under the SOM's 6 core competencies. The students were notified orally that data collected were not student identified and were only used to document core competencies. This compilation was then compared by all the authors with the student-identified learning issues from the questionnaire. Both learning issues self-identified by students in the Death Round Questionnaire and observed in the Facilitators' Log were matched with their best fit within the core competencies. The Death Rounds questionnaire in which students self-reported their experiences with memorable deaths was submitted to and approved for use by the UNM SOM Human Research Review Committee as an amendment to the research and evaluation conducted by the Office of Program Evaluation, Education and Research at UNM SOM. Students voluntarily completed the questionnaire.

Results

In April 2007, 63 of 70 students completing their clinical clerkships responded to a Death Rounds Questionnaire. A total of 58 of the 63 respondents participated in Death Rounds at some time during their required clerkships. Ninety percent (90%) of these students reported having encountered 1 or more patient deaths in medical school.

Students most often used the following adjectives to describe their most recent patient death in medical school: "unexpected" (38% of 58 students), "natural" (35%), "a sense of closure" (33%), "peaceful" (25%), "timely" (21%), and "full of suffering" (19%). When describing how they felt about the patient's death, 73% of the respondents chose "sad," 27% "frustrated," 25% "moved," 23% "conflicted," and 23% "relieved."

Seventy-six percent (76%) of students completing the questionnaire reported discussing a patient's death and its implications with other students. Fifty-two percent (52%) discussed it with interns, 52% with significant others, 43% with residents, and 24% with attending physicians. Thirty-five percent (35%) discussed the death during Death Rounds. Fifty-eight percent (58%) of students reported that Death Rounds helped them develop more comfort about death, and 73% reported that Death Rounds helped them identify important components in a patient's death.

Table 1. Students' Ratings of Their Knowledge, Skills, or Competence Before They Had Death Rounds and Today

Issues and Topics	Rating of Skills, Knowledge, or Competence to Address the Following Issues and Topics BEFORE Death Rounds								Rating of Skills, Knowledge, or Competence to Address the Following Issues and Topics TODAY								Effect Size[a]
	1	2	3	4	5	6	7	Mean	1	2	3	4	5	6	7	Mean	
Students experiencing patients deaths in medical school (n = 51)																	
Knowledge and skills in palliative care/symptom management	5	12	15	11	6	2	-	3.1	-	1	8	17	17	7	1	4.5	1.3
Knowledge and skills in end-of-life ethics	4	8	14	12	9	4	-	3.5	-	1	2	19	15	13	1	4.8	1.2
Knowledge and skills in end-of-life legal issues	11	13	7	9	9	2	-	3.0	3	5	8	15	14	6	-	4.0	1.0
Knowledge and skills in end-of-life cultural/spiritual issues	5	7	15	12	8	4	-	3.5	1	2	6	14	18	9	1	4.5	0.9
Skills in discussing a patient's death with the members of my team	6	12	11	10	7	5	-	3.3	-	2	7	12	17	10	3	4.7	1.1
Students not experiencing patients deaths in medical school (n = 6)																	
Knowledge and skills in palliative care/symptom management	1	3	-	2	-	-	-	2.5	-	-	3	2	-	1	-	3.8	1.6
Knowledge and skills in end-of-life ethics	1	3	1	-	1	0	-	2.5	-	-	1	3	1	1	-	4.3	1.9
Knowledge and skills in end-of-life legal issues	1	4	-	-	1	0	-	2.3	-	-	3	2	1	-	-	3.7	1.6
Knowledge and skills in end-of-life cultural/spiritual issues	1	3	-	1	-	1	-	2.8	-	-	1	3	-	1	1	4.7	1.9
Skills in discussing a patient's death with the members of my team	1	3	1	-	-	1	-	2.7	-	-	1	3	1	1	-	4.3	1.6

Rating scale: 1, none or no skill; 2, vague knowledge, skills, or competence; 3, slight knowledge, skills, or competence; 4, average among my peers; 5, competent; 6, very competent; 7, expert, teach others.

[a] Effect size is the standard mean difference between paired postparticipation and preparticipation ratings. It is calculated by using the average paired difference between postparticipation and preparticipation ratings as the numerator and the standard deviation of the paired differences as the denominator. A classification of effect size offered by Cohen is: 0.2, small, 0.5, medium, and 0.8, large.[28]

Of the self-identified learning issues from the Death Rounds Questionnaire, 36% resolved them by discussion with others, and 28% of the medical students researched the answers on their own. Students also relied on self-reflection about the death and preexisting knowledge to interpret their experiences with death, as exemplified by the comment, "I thought about it, put it in perspective, reflected on the experience, and appreciated it."

Table 1 describes the students' assessment of their palliative medicine knowledge and skills before and after participation in Death Rounds. Both students experiencing patient deaths in medical school and those not experiencing patient deaths rated their skills after Death Rounds higher in the 5 skill categories with effect sizes ranging from 0.9 to 1.9.

Table 2 includes evidence from both the Death Rounds Questionnaire and Facilitators' Logs demonstrating that multiple issues and topics were addressed and that these topics were associated with the SOM's 6 core competencies. Although some of the learning issues lent themselves to more than 1 of the 6 competencies, the authors found that no learning issues fell outside of the competency categories.

Discussion

Death Rounds is now embedded in the third year Internal Medicine and Surgery Clerkships. Ninety percent (90%) of the students experienced a recent clerkship death, selecting diverse adjectives to describe the impact of the experience in personal terms. Students who did not experience a clerkship death (10%) still actively participated in the discussions, at times sharing personal stories of loved ones who had died or been seriously ill. These students also shared reflections on other relevant experiences such as delivering bad news to patients or respecting cultural and religious beliefs in hospitalized patients. Our findings in which students describe having strong emotional responses to patient deaths are consistent with and reinforce other similar studies.[20]

Table 2. Examples of Student Identified Learning Issues in Death Rounds

UNM-SOM Core Competencies	Student-Identified Learning Issues From Patient Deaths[a]	Learning Issues Observed During Death Rounds[b]
Medical knowledge, integration, and critical reasoning	• Hepatorenal syndrome • Pain physiology • Acid/base disorders • Signs of imminent dying	• Dx of delirium, pain, dyspnea • Pathology of multisystem organ failure, hepatorenal syndrome, respiratory distress, CHF
Patient care	• Use of opioids • DVT management • Patient-centered EOL issues • Symptom management	• Rx of delirium, dyspnea, pain • Decision making: with uncertainty of prognosis • Family access to bedside • Predicting time of death
Practice-based learning and improvement	• Communication with patient and family • Self-directed learning • Acceptance of death as a natural process • Uncertainty and decision making	• Feeling of failure, incompetence • Angry/sad at observing rude behavior of senior medical staff • Important to say goodbye • "Debrief" after patient dies: collegial support
Interpersonal and communication skills	• Empathy • Obtaining DNR/DNI • Talking to family after a code	• Bereavement support • Intense emotions expressed at death • Pronouncement • Professional translators
Professionalism/ethics	• Provider emotions • Conflict among consultants • Conflict with family	• Withdrawal/withholding • Informed consent • How can we recognize our own biases

Abbreviations: CHF, congestive heart failure; DNR/DNI, do not resuscitate/do not intubate; DVT, deep venous thrombosis; Dx, diagnosis; EOL, end of life; UNM-SOM, University of New Mexico School of Medicine.
[a] Adapted from Death Rounds Questionnaire.[20]
[b] Adapted from Facilitators' Log (developed by authors).

To address the depth and complexity of students' response to these powerful experiences, it is important to have a holistic curriculum that supports students' cognitive and noncognitive development. Fourth year students in recent focus groups identified Death Rounds as among the best educational experiences in the third year. In their comments they stated:

> Death Rounds "was a really nice opportunity [to] talk about patients that you've seen, ethical issues that came up."
> "I think there should have been more of them. . .We only have two (in medicine and surgery) during Phase 2; it just seemed like things came up a lot more frequently."
> "There should have definitely been one on Peds . . ."
> "Or maybe one in each rotation. . ."

About one quarter of our students spoke about the death with an attending physician, although our study did not identify whether these exchanges were group discussions or private conversations. These findings are different from those seen in a prior study of third year students, in which none of the discussions about the impact of a patient's death were with medical school faculty.[20]

Prior studies of student and physician reactions to death have shown that providing students opportunities to analyze the medical reasons alone for a patient's death does not fulfill the need students have to discuss the death.[18,29,30] Institutionalized Death Rounds validates the importance of collegial support between students, and students and faculty in processing the emotional impact of patient deaths. In addition, Death Rounds is a structured, institutionally supported resource for helping students to understand the clinical, ethical, legal, professional, cultural, and spiritual aspects of death.

Students' self-ratings of knowledge, skills, and competence after Death Rounds indicate they perceive that they have gained knowledge and skill associated with the targeted content. Belief in one's ability and knowledge to care for dying patients,

interact with their families, or console or talk with team members when patients die is associated with greater likelihood of engaging in those behaviors in subsequent similar situations. Death Rounds also include constructs important to the development of learner's self-efficacy through the support of discussion and feedback to learners about their concerns and their challenges with a patient death.[31] These Death Rounds patient death discussions reinforce self-efficacy. The development of learners' self-efficacy has been positively linked to subsequent student performance and goal attainment in several studies[32,33] Faculty support through encouragement or feedback, role modeling and the expressed belief of faculty in learners' abilities to master the skills and knowledge associated with palliative medicine death rounds are essential components in Bandura's model and that are incorporated as specific components of Death Rounds.[31] Research indicates that faculty guidance, structure and support in identification of specific goals and skills integrated into Death Rounds will facilitate learners' positive perceptions of their self-efficacy.[34,35]

Students slightly lower ratings of legal knowledge, skills, and competencies in Table 1 are consistent with other findings in the literature concerning misconceptions about end-of-life legal issues.[36] These findings do suggest, however, a need for further exploration with students to ask whether (1) Death Rounds lends itself to discussion of legal issues, and (2) students are interested in more information about legal issues in end-of-life care.

Overall, our study illustrates several concepts that are unique to the published literature. First, it shows that a significant percentage of our students discussed death with an attending physician. Second, it summarizes the outcomes of an institutionalized curriculum with comparison of data across several (usually) divergent clerkships. Third, it shows that learning issues identified by students and faculty from the Death Rounds curriculum cover the breadth of our SOM's competencies.

Limitations

Our study has several potential limitations. Self-assessment data applied to generic knowledge and skills are generally not considered sufficient to state that the students gained the focal competencies solely from participation in death rounds. Self-assessment tools do have inherent weaknesses.[37] One component of the Death Rounds Questionnaire requires retrospective student self-assessment about their knowledge, skills, and abilities before and after Death Rounds. A larger component is based on students' postexperience reflection on the learning,[38] the challenges, the unanswered questions based on their actions and the actions of others that are associated with the memorable death.[31] Future assessment would need to include objective measures for the competencies listed. An additional pending article by the authors includes data obtained across the 4-year curriculum that measured a positive attitudinal change to providing end-of-life care.

Another limitation in this work is that students and faculty from only 1 medical school participated in Death Rounds and its evaluation. Students participated in Death Rounds at set times on certain rotations, and their experiences may have been different on different clerkships or at different times in their training. We did not formally interview each student about his or her experience with a patient's death, nor did we verify the circumstances of that death with other team members. Although we introduced death rounds in the Obstetrics/Gynecology and Pediatrics rotations, the sessions were not sustained due to a lack of a faculty champion. Now that we have had success on the several other clerkships, we believe we could succeed in these clerkships as well. We would like to add fourth year students and to have more residents and faculty participate in Death Rounds. We believe that wider participation will only enhance our discussions.

Conclusions

A medical student's experience with death and dying can have profound impact on that student's professional and personal development. Death Rounds are small group sessions that enable students and faculty to learn from a "teachable moment."[29,39-41] Death Rounds fits a transformative educational model that has been described by others.[24,42] The model promotes a safe environment that cultivates clinical competence, compassion, and respect for patients. These discussions also counterbalance the nonreflective aspects of clinical training and potential for the development of cynical behavior.[42-45] Targeted learning content and skills including spirituality, medicolegal issues, cultural diversity,

communication skills, ethics, and pain management are easily integrated.[20,24] Professionalism in patient care is discussed, examined, and fostered.[46-48]

This model can be easily implemented once a committed faculty champion is identified. Death Rounds minimally affect on clerkship time and faculty resources. Death Rounds in third year clerkships can enhance the growth of the new subspecialty of Palliative Medicine, emphasize its applicability to multiple specialty settings, and serve as an efficient vehicle for the integration of core competencies in the clinical years.

Acknowledgments

The development of an integrated Palliative Medicine Curriculum at the University of New Mexico School of Medicine has been supported by the Soros Foundation Project Death in America Scholars program and the Arthur Vining Foundation.

Appendix A

At University of New Mexico School of Medicine (UNM SOM), the 4-year curriculum is divided into 3 phases. Phase 1 lasts approximately 21 months and includes introductory and organ system blocks, clinical skills, research, and rural community experiences. Phase 2 comprises 7 required "third year" clerkships (Family and Community Medicine, Internal Medicine, Neurology, Obstetrics and Gynecology, Pediatrics, Psychiatry, ans Surgery) over a 12-month period. Phase 3 (12 months) includes 4 required clinical selectives (eg, Intensive Care Unit (ICU), Subinternship, Ambulatory Medicine, and Rural and Community Practice) and electives.

Appendix B

Death Rounds Guideline for Medical Student Presentations

The goal is to briefly present enough clinical background to get to critical clinical, ethical, or palliative care decision points in the actual case of the dying patient. The real decisions that challenged students or the teams should be the focus of the discussion.

Questions/issues may include one or more of the following:

Decisions regarding medical/surgical management
Pain/symptom management
End-of-life decision making that were made or avoided
Ethical questions raised by the case
Quality of death for patient/family
Impact of experience on student/team
Other
General guidelines:
Present the basic clinical and demographic information needed to understand the dilemma; 5-10 min.
Include your personal reactions to the situation, and whether you agreed or were troubled by the decisions made.
If the patient died while under your care, be sure to include any clinical, ethical, or palliative medicine issues that emerged in the patient's final course.

References

1. American Board of Hospice and Palliative Medicine [homepage on the Internet]. 2007. Available at: http://www.abhpm.org.
2. Liaison Committee in Medical Education [homepage on the Internet]. 2004. Functions and Structure of a Medical School [Cited 2004]. Available at: http://www.lcme.org/standard.htm.
3. Institute of Medicine. *Crossing the Quality Chasm. A New Health System for the 21st Century*. Washington, DC: The National Academic Press; 2001.
4. The Medical School Objectives Writing Group. Learning objectives for medical student education—guidelines for medical schools. report I of the Medical School Objectives Project. *Acad Med*. 1999;74:13-18.
5. American College of Graduate Medical Education [homepage on the Internet]. 1999. ACGME Outcome Project. Available at: http://www.acgme.org/outcome/assess/assHome.asp.
6. Bickel-Swenson D. End-of-life training in U.S. medical schools: a systematic literature review. *J Palliat Med*. 2007;10:229-235.
7. Dickinson G. Teaching end-of-life issues in US medical schools: 1975 to 2005. *Am J Hosp Palliat Care*. 2006;23:197-204.
8. Lloyd-Williams M, MacLeod RD. A systematic review of teaching and learning in palliative care within the medical undergraduate curriculum. *Med Teach*. 2004;26:683-690.
9. Sullivan AM, Lakoma MD, Block SD. The status of medical education in end-of-life care: a national report. *J Gen Intern Med*. 2003;18:685-695.

10. Steen PD, Miller T, Palmer L, et al. An introductory hospice experience for third-year medical students. *J Cancer Educ*. 1999;14:140-143.
11. Ross DD, Keay T, Timmel D, et al. Required training in hospice and palliative care at the University of Maryland School of medicine. *J Cancer Educ*. 1999;14:132-136.
12. Quill TE, Dannefer E, Markakis K, et al. An integrated biopsychosocial approach to palliative care training of medical students. *J Palliat Med*. 2003;6:365-380.
13. Porter-Williamson K, Von Gunten CF, Garman K, Herbst L, Bluestein HG, Evans W. Improving knowledge in palliative medicine with a required hospice rotation for third-year medical students. *Acad Med*. 2004;79: 777-782.
14. American Association of Medical Education. [home page on the internet]. 2007. Medical School Graduation Questionnaire Summary Data. Available at: http:// www.AAME.org.
15. Rabow M, Gargani J, Cooke M. Do as I say: curricular discordance in medical school end-of-life care education. *J Palliat Med*. 2007;10:759-769.
16. Lown BA, Chou CL, Clark WD, et al. Caring attitudes in medical education: perceptions of deans and curriculum leaders. *J Gen Intern Med*. 2007;22:1514-1522.
17. Moores TS, Castle KL, Shaw KL, Stockton MR, Bennett MI. "Memorable patient deaths": reactions of hospital doctors and their need for support. *Med Educ*. 2007;41:942-946.
18. Jackson VA, Sullivan AM, Gadmer N, et al. "It was haunting. . .": physicians' descriptions of emotionally powerful patient deaths. *Acad Med*. 2005;80:648-656.
19. Redinbaugh EM, Sullivan AM, Block SD, et al. Doctors' emotional reactions to recent death of a patient: cross sectional study of hospital doctors. *BMJ*. 2003;327: 185-196.
20. Rhodes-Kropf J, Carmody SS, Seltzer D, et al. "This is just too awful; I just can't believe I experienced that. . ." medical students' reactions to their "most memorable" patient death. *Acad Med*. 2005;80:634-640.
21. Branch W, Pels R, Lawrence R, Arky R. Becoming a doctor: critical incident reports from third year medical students. *N Engl J Med*. 1993;329:1130-1132.
22. Donley-Hayes K. A piece of my mind. At face value. *JAMA*. 2006;295:2701-2702.
23. Hough CL, Hudson LD, Salud A, Lahey T, Curtis JR. Death rounds: end-of-life discussions among medical residents in the intensive care unit. *J Crit Care*. 2005;20:20-25.
24. MacLeod RD, Parkin C, Pullon S, Robertson G. Early clinical exposure to people who are dying: learning to care at the end of life. *Med Educ*. 2003;37:51-58.
25. Mallory JL. The impact of a palliative care educational component on attitudes toward care of the dying in undergraduate nursing students. *J Prof Nurs*. 2003;19:305-312.
26. Kitzes J, Savich R, Kalishman S, Sanders J, Morrison C, Prasad A, Timm C. Fitting it all in: integration of 12 cross-cutting themes into a School of Medicine Curriculum. *Med Teach*. 2007;29:489-494.
27. Cacchione P. What's another word for euphemism? *Am J Hosp Palliat Care*. 2000;17:6-7.
28. Cohen J. *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates; 1988.
29. Sharp RR. Teaching rounds and the experience of death as a medical ethicist. *J Med Ethics*. 2008;34:60-62.
30. Ratanawongsa N, Teherani A, Hauer K. Third-year medical students' experiences with dying patients during the internal medicine clerkship: a qualitative study of the informal curriculum. *Acad Med*. 2005;80:641-647.
31. Bandura A. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NM: Prentice-Hall; 1986.
32. Goddard RD. Collective efficacy: A neglected construct in the study of schools and student achievement. *J Educ Psychol*. 2001;93:467-476.
33. Pajares F. Current directions in self-efficacy research. In: Maehr ML, Pintrich PR, eds. *Advances in Motivation and Achievement*. Greenwich, CT: JAI Press; 1997:1-49.
34. Goddard RD, Hoy WK, Woolfolk-Hoy A. Collective teacher efficacy: Its meaning, measure, and effect on student achievement. *Am Educ Res J*. 2000;37:479-507.
35. Goddard RD. The impact of schools on teacher beliefs, includece and student achievement: The role of collective efficacy. In: Raths J, McAninch A, eds. *Advances in Teacher Education* (vol 6). Westport, CT: Information Age Publishing; 2003:183-204.
36. Meisel A, Snyder L, Quill T. Seven legal barriers to end-of-life care: myths, realities, and grains of truth. *JAMA*. 2000;284:2495-2501.
37. Eva KW, Regehr G. Self-assessment in the health professions: a reformulation and research agenda. *Acad Med*. 2005;80(suppl 10):S46-S54.
38. Schon D. *The Reflective Practitioner. How Professionals Think in Action*. London: Temple Smith; 1983.
39. Branch WT Jr. Small-group teaching emphasizing reflection can positively influence medical students' values. *Acad Med*. 2001;76:1171.
40. Epstein RM. Mindful practice. *JAMA*. 1999;282: 833-839.
41. Klein D, Schipper S. Family medicine curriculum: improving the quality of academic sessions. *Can Fam Physician*. 2008;54:214-218.

42. Browning DM, Meyer EC, Truog RD, Solomon MZ. Difficult conversations in health care: cultivating relational learning to address the hidden curriculum. *Acad Med*. 2007;82:905-913.
43. Branch WT, Suchman A. Meaningful experiences in medicine. *Am J Med*. 1990;88:56-59.
44. Rosenbaum ME, Lobas J, Ferguson K. Using reflection activities to enhance teaching about end-of-life care. *J Palliat Med*. 2005;8:1186-1195.
45. Fins JJ, Gentilesco BJ, Carver A, et al. Reflective practice and palliative care education: a clerkship response's to the informal and hidden curriculum. *Acad Med*. 2003;78:307-312.
46. Inui TS. *A flag in the Wind: Educating for Professionalism in Medicine*. Washington, DC: AAMC; 2003:1-37.
47. Novack DH, Suchman AL, Clark W, Epstein RM, Najberg E, Kaplan C. Calibrating the physician: personal awareness and effective patient care. *JAMA*. 1997;278: 502-509.
48. Christakis DA, Feudtner C. Ethics in a short white coat: the ethical dilemmas medical students confront. *Acad Med*. 1993;68:249-254.