

16 The Paradox of Teaching Empathy in Medical Education

Johanna Shapiro

The emotional burden of avoiding the patient may be much harder on the physician than he [sic] imagines . . . a doctor's job would be so much more interesting and satisfying if he simply let himself plunge into the patient, if he could lose his fear of falling.

—Anatole Broyard, *Intoxicated by My Illness*, 1992

The Paradox of Empathy in Medical Education

In the domain of medical education, empathy is touted as among the essential attitudes and skills of professionalism. Various educational and professional bodies in medicine, such as the Accreditation Council for Graduate Medical Education (Joyce 2006) and the Association of American Medical Colleges (Anderson et al. 1998) have identified empathy as a key component of professionalism and specify that medical education must include curriculum whose goal is the development of empathy in learners (Larson and Yao 2005). The empathy-altruism hypothesis (Batson et al. 1991) argues that empathic concern is a requisite of altruistic action, another fundamental anchor of a profession that mandates placing the patient's interests above those of self.

Empathy is deemed especially important in medicine because of the crucial role of the physician in creating *representations* of the patient's story through the medical chart (Hyden 2008). At least to some extent, and especially when the patient's voice becomes weak or nonexistent, the patient ends up on the periphery of the medical action, and the vicarious voice of the physician becomes the authoritative depiction of the patient. Under these circumstances the capacity to accurately and honestly resonate to the patient's perspective becomes essential. Further, empathy has been implicated in patient adherence to medical regimens (Kim, Kaplowitz, and Johnston 2004), with research documenting a direct relationship between patient-perceived physician empathy and increased satisfaction and compliance. Other research identifies a strong relationship between empathy and establishing the working alliance necessary to an effective patient-doctor relationship (Fuertes, Boylan, and Fontanella 2009).

Awareness of such connections has led to medical schools across the country providing required courses in communication skills that routinely include the teaching of empathy. Yet research shows that despite recognition of the importance of empathy in a medical student's education, and despite efforts to develop empathic communication through curricular instruction, student empathy actually *declines* significantly during the third year of medical school and continues low throughout the fourth year of training (Newton et al. 2008; Hojat et al. 2009). How is this possible? In a seminal article on medical education, the problem is stated as follows: "North American medical education favors an explicit commitment to traditional values of empathy, compassion, and altruism—and a tacit commitment to an ethic of detachment, self-interest and objectivity" (Coulehan and Williams, 2001). This educational deficiency is not necessarily self-correcting. Rita Charon, professor of internal medicine at Columbia College of Physicians and Surgeons, has written that even experienced "physicians sometimes lack the capacities to recognize the plights of their patients, to extend empathy toward those who suffer, and to join honestly and courageously with patients in their illness" (Charon 2001, 1897). Thus, although there are a plethora of words expended in support of empathy in clinical training and practice, it has not successfully translated into sustainable and effective attitudes and actions. This article analyzes this paradox, identifies possible reasons for its existence, and suggests potential pedagogical alternatives.

What Is Clinical Empathy?

Definitional Complexity

Perhaps surprisingly, given its pervasive appearance in the medical education literature, there is considerable disagreement about the definition of empathy. Traditional definitions used in medical education include emotive, moral, cognitive, and behavioral dimensions (Stepien and Baernstein 2006). A leading medical ethicist, Jodi Halpern, in her book *From Detached Concern to Clinical Empathy* and other writings (Halpern 2001, 2003), emphasized that empathy must involve emotional resonance not simply cognitive comprehension. Other scholars have described empathy as a complex process that starts with gaining insight into the patient's concerns, feelings, and distress; engaging emotionally with the patient's perspective; feeling compassion at the distress of the patient; and finally, taking action motivated by a desire to remove or alleviate the causes of that distress (Benbassat and Baumal 2004). It is apparent that, utilizing these complex, multifaceted definitions, true empathy is difficult to achieve because it may entail the physician being pulled across a boundary she did not want to cross and entering a zone where life is profoundly insecure (Frank 2008).

Why Medicine Has Trouble Successfully Incorporating the Construct of Empathy

Physicians belong to a profession that has increasingly placed itself squarely within the logicoscientific tradition. Medicine's positivist worldview, which prioritizes technological progress, hierarchy, certainty, and efficiency, encourages conceptualizing patients as objects and can lead to the doctor feeling alienated from, rather than empathic toward, the patient (Davis-Floyd and St. John, 1998). Researchers have shown that patients are often referred to in derogatory ways by physician role models, conceptualized as tasks to finish or as objects from which to extract learning (Dyrbye, Thomas, and Shanafelt 2005). The most widely accepted view of medical professionalism is that its practitioners should respond to the suffering of patients with objectivity and detachment (Coulehan 2009a,b). It has also been observed that physicians "place themselves out of their patients' lives" by identifying themselves with heroic invincibility and their patients with illness, suffering, and misfortune (Irvine 2009). In general, medical culture does not acknowledge the physician's need to experience and process personal feelings (Jennings 2009).

The cultural norms of medical education likewise expect that aspiring doctors should not show emotion, especially emotion that helps connect the student-physician to the patient. Like clinical practice itself the medical education process promotes emotional detachment, affective distance, and clinical neutrality (Evans, Stanley, and Burrows 1993; Hojat 2009). Medical pedagogy encourages "detached concern which devalues subjectivity, emotion, relationships, and solidarity" (Coulehan 2005). Medical students are particularly vulnerable to emotional detachment because they are still learning how to modulate their own emotional states in the often stressful and emotionally demanding environment of clinical medicine (Jennings 2009). Since students don't know how to cope with the often intense feelings they experience on a daily basis, they end up denying or ignoring them.

Suppression of the strong emotions that arise in the face of death, disability, medical error, and one's own mortality is exhausting and can lead to burnout and compassion fatigue. In a dysfunctional cycle, this emotional exhaustion prompts further efforts to cope by promoting distancing oneself emotionally from patients (Kearney et al. 2009). In one recent study only 19 percent of a randomized sample of learner-reflective clinical stories included any emotional content whatsoever. The authors concluded that the hidden curriculum (Hafferty and Franks 1994) continues to socialize students to quell their emotions and to reinforce norms against displaying or even feeling/acknowledging emotion (Karnieli-Miller et al. 2010). Because they are unfamiliar with and afraid of their own emotional landscape, medical students are also often embarrassed and uncomfortable when confronted with patient

emotion (which triggers emotions in themselves) (Benbassat and Bauml 2001). Students who are not able to examine and come to terms with their own psychological lives find it difficult to connect empathically with others (Medved and Brockmeier 2008).

The Pseudosolution: Taming an Unruly Construct

Understanding this background makes it easier to see that definitions of empathy that include the emotions seem unpredictable and uncontrollable to medical educators. Since there is general consensus that physicians “need” empathy, the pedagogical result is often based on ways of “taming” empathy so that it conforms to reassuringly normative assumptions and practices already extant in medicine. This has meant by and large separating empathy from the unruliness and unpredictability of emotion. Cognitions, having to do with thought processes and critical inquiry, are more comfortable and familiar to academics of all stripes¹, and especially to physicians. Therefore an understanding of empathy that relies solely on cognitive processes seems more controllable, more manageable, more teachable, and more measurable in terms of outcomes. The result has been to promote as empathy a kind of cognitive listening to and apprehension of the patient’s concerns while avoiding the perceived “risks” of emotional involvement with the patient.

Cognitive-Behavioral Empathy

In medical education research empathy is defined more and more as a purely cognitive exercise. This is particularly significant because, while precision and meaning restriction are key elements of the scientific method, research also bestows a mantle of “truth” on the constructs it studies and therefore exerts a profound influence on what is taught clinically and how. Definitions such as the one formulated by Hojat (2009) and Hojat et al. (2009) identify empathy as an objective, rational, accurate, intellectual process that is “always” good for both patient and practitioner, at the expense of sympathy, which is vilified as an emotional, self-indulgent, co-dependent, even histrionic practice that will lead to burnout and compassion fatigue. These and similar efforts to separate out the active elements of empathy (Crandall and Marion 2009) have the effect of making the construct easier to recognize and identify—but not necessarily of making it more “empathic” in its clinical manifestations. Nevertheless, empathy is now typically taught as a set of cognitive and behavioral skills (Winefield and Chur-Hansen 2000). This cognitive emphasis translates into cognitive-behavioral approaches in which specific verbal and nonverbal phrases or gestures become stand-ins for empathy: “I understand your concern”; “Your language is expressing sadness”; “I grasp that you don’t want to die.” Similarly, touching a shoulder or knee also reductively become synonymous with empathy.

Positive Physician Role Models to Teach Empathy

In contemporary medical education, the teaching of empathy is formally incorporated into the curriculum primarily in the preclinical years, usually in the form of a lecture and/or role-playing exercises. When empathy is considered as part of students' learning experience during the clinical years, it is almost entirely addressed through the process of role modeling. This idea assumes a two-step process: First, physicians "model" empathic attitudes on the wards and in clinics. Then, attentive students observe these empathic demonstrations and assimilate them. Although it is true that role modeling has a highly significant influence on students' own empathy (Winseman et al. 2009), there are problems with this approach. Unfortunately, we have learned that physician role modeling can be negative as well as positive. Research on the hidden curriculum (Hafferty 1988) reveals that students frequently encounter physician role models who embody problematic qualities such as rudeness, dismissiveness, and lack of empathy. Further, even positive role models do not always know how to teach what they do (Shapiro 2002), resulting in the "wow" effect: students are suitably impressed by outstanding role models, but they are unable to identify exactly what it is that these role models are doing that they could emulate or incorporate. Thus, we cannot simply rely on the existence of positive role models to convey attitudes, values, and skills of empathy to medical students.

Problematic Unintended Consequences

Fake Empathy

The cognitive-behavioral methods of teaching empathy so widespread in the preclinical years run the risk of becoming mere intellectual exercises for medical students. Exclusively technique-based modes can mean that empathy increasingly is understood by medical students as a means to other, more valuable ends, rather than a morally valuable end in itself. In this construction empathy may sometimes become a means to ends benefiting students (positive evaluation of performance) and sometimes as promoting positive patient outcomes (increased compliance, increased continuity). Of course these are not undesirable ends. However, they remain squarely situated in the ethical position of "getting" and "acquiring." In such formulations empathy becomes a tool to obtain an objective (albeit an appropriate one) rather than a quality that one human being owes another (Levinas 2005). As Pence wrote in his seminal work on compassion (Pence 1983), merely imitating compassionate behavior is not compassion. Much the same could be said for empathy.

In particular, the standardized patient (SP) encounters that form the center of the Objective Structured Clinical Examination (OSCE) increasingly used to evaluate empathy and other "communication skills" among students and residents can

encourage learners to merely acquire mimetic displays of empathy, superficial language and gestures that earn them success in an examination context but are detached from underlying emotional connection. Because of the evaluative link, students may infer that there are narrowly correct ways of interacting with patients, which in turn can lead to formulaic, impersonal interactions and, ironically, to an appearance of *lack* of empathy (Case and Brauner 2010). Such artificial assessment situations encourage the appearance of relationship between student and SP while they fail to establish authentic connection (Hanna and Fins 2006). Literary scholars have noted that conventional language is sometimes too familiar, quotidian, and well known to adequately understand the uniqueness of suffering (Brockmeier 2008), suggesting that it is only by *breaking out of* routinized ways of talking and thinking that empathy can be communicated to another. Yet the standardized format of an OSCE works directly counter to such spontaneity and originality in language. Further, scholars have also expressed concern as to whether the behaviors performed in SP interactions actually transfer to practice with actual patients or are sustained over time in the absence of further evaluation, raising the specter of a rigorous, but meaningless, evaluation method (Meitar, Karnieli-Miller, and Eidelman 2009).

Empathic Failures toward Stigmatized Others

A purely cognitive empathy risks lack of emotional engagement and meaningful understanding of the other. Pence pointed out that true compassion must be rooted in deeper internal attitudes and behaviors and must recognize that the suffering of the other *really matters*, and this insight is true for empathy as well. When empathy is viewed more as a performance than as a deeply held commitment to a way of being in the world, it can easily result in “selective” empathy, that is, performance that is generated in response to certain evaluative situations, or something that naturally arises toward certain “likeable” patients or patients similar to the student, *not* as something that needs to be cultivated toward all patients, especially stigmatized, marginalized, or otherwise unappealing patient populations. Cognitive-behavioral empathy leads to rejection of stories that do not look or sound like what the student expects, stories that strike the student as unfamiliar, broken, disjointed, lacking coherence, in short, the kinds of stories that patients who appear as “other” to medical students tend to tell (Bulow 2008). In the absence of core ethical values that trigger pursuit of empathic responses regardless of situational cues, students will likely not feel it necessary to empathize with such stories. In fact, neuroscience research has demonstrated that perceived stigma has a significant effect on expressed empathy for patients (Decety, Echols, and Correll 2009). In clinically based research there is evidence that patients who make physicians emotionally uncomfortable, such as dying patients, tend not to elicit

empathy in their physicians. For example, one study of medical encounters between oncologists and patients with advanced disease found that physician responses to empathetic opportunities offered by the patients were infrequent (Pollack et al. 2007). In another study on breaking bad news, students who were distanced/detached or defensive/avoidant in relation to their patients avoided acknowledging patient emotions or expressing empathy for their plight (Meitar, Karnieli-Miller, and Eidelman 2009). Students with little awareness of their own and the patient's emotions set rigid boundaries to try to control the interaction and tended to avoid the expression of empathy.

Devaluing of Empathy

Under these conditions empathy, at best, is something that learners (and practicing physicians) may sometimes undertake but rarely publicly acknowledge or advocate for (Mattingly 2008). Because the culture of medicine does not consistently authorize, support, or approve the attitudes and practices of empathy, the needs to identify and express empathy toward patients tend not to acquire official status in the clinical environment. Since the expression of empathy is not a billable procedure, and since learners rarely see even positive role models reflecting on how to experience and convey empathy, it is easy for students to see empathy as a "nice" but nonessential aspect of practice. Even when they do emerge, empathic responses are potentially fragile and fleeting. They are often viewed by the students who express them as tangential or irrelevant to "real" medicine, a way of engaging with the patient that should be distrusted, discounted, and devalued as often as they are esteemed.

Demoralizing Outcomes of Empathy Training

Not infrequently, medical students are resentful of efforts to teach empathy didactically (Henry-Tillman et al. 2002; Shapiro et al. 2009). Sometimes they express feelings of being patronized by a curriculum that tries to "teach" empathy and related attitudes and draw the conclusion that they are being told that they are not good people. In one study students reported that personal factors (parents, life experience, faith) had already molded their capacity for empathy and compassion at least as much if not more than formalized instruction or role modeling in medical school (Wear and Zarconi 2007). The implication was that these did not need any help in learning how to be empathic, thank you very much. Students in this same study further noted that sometimes their teachers seemed more interested in the appearance of altruism rather than in the actual feeling. Thus, at least to some degree, the performative emphasis on empathy training has backfired, with students resisting what they perceive to be efforts to remold existing values they already consider to be perfectly sound.

A Modest Proposal for Encouraging Empathy in Medical Learners

The Necessity for Culture Change

Ultimately, the overall context of medical practice is more important for teaching empathy than the efforts of any one role-model individual, admirable as such efforts may be. This means, that to effectively communicate the importance of empathy to medical learners, we must do no less than change the culture of medicine (Pence 1983; Coulehan 2005). This is of course a large order; and change can usefully occur on multiple levels, such as economic, political, philosophical, and sociological. In the context of cultivating empathy perhaps the most important change needed is an attitudinal one appreciating the importance of skillfully recognizing and dealing with emotions in the doctor-patient relationship. It is only in this way that the multidimensional complexity of the construct of empathy can be comfortably absorbed into medical education.

Learning to Identify and Work Skillfully with Emotions

Over a decade ago, leading physician scholars recognized that physician emotions and emotional hot buttons, expectations, beliefs, attitudes, assumptions, and needs have an important, but often unacknowledged, impact on how they interact with patients (Suchman et al. 1997), including how they express or avoid empathy. Yet this important insight did not translate into pervasive curricular changes because it could not be supported by the existing cultural norms of medicine. In a more recent study of breaking bad news, researchers found that students who were “involved” and emotionally connected with the patient were able to avoid algorithmic, rote forms of interacting. They were not afraid of the patient’s emotional reactions, seemed “well-prepared to harness their emotions in the service of the patient” (Meitar, Karnieli-Miller, and Eidelman 2009, 1589), and were much more likely to express empathy toward the patient than other students in the exercise.

Medical educators often make the assumption that it is easier to work with cognitions than to change emotions (Hojat 2009). However, there are many intriguing curricular initiatives whose goal is to help students become familiar with emotions, both their own and those of their patients. Training in mindfulness (Krasner et al. 2009), narrative medicine (Charon 2006), medical humanities (Shapiro et al. 2006; Foster and Freeman 2008), and reflective writing (Reis et al. 2010) have all shown theoretical and empirical promise as ways of helping students to become more aware of and learn to interrogate critically the role of emotions in clinical practice and, as a result, to express multidimensional empathy.

Emotional Regulation

In this regard the concept of emotional regulation is relevant. When empathic over-
arousal occurs in response to another’s emotional state or condition, it results in an

aversive, self-focused emotional reaction. Individuals who can regulate their emotional state are better able to avoid being overwhelmed by their own emotions and therefore can focus on the needs of the other (Eisenberg et al. 1994; Decety and Meyer 2008). Research in the neurosciences has established that empathy consists of three components: emotion sharing, perspective-taking (taking the point of view of another), and emotion regulation (Decety and Lamm 2006). This means that empathy involves both the capacity to emotionally respond to the suffering of another as well as the capacity to regulate and modulate this experience. This formulation suggests that what is needed is not the ignoring or suppressing of emotion, but its regulation, so that it is present, but modulated.

Putting Empathy Back into the Patient-Doctor Equation

We should not accept that the emotional component of empathy is dangerous and should be exiled from the doctor-patient encounter. On the contrary, purely “cognitive” empathy without the “proper dose” (Balint 2000) of emotion runs the risk of being excessively operationalized, codified, and measured in ways that will become pointless and meaningless. From a pedagogical perspective incorporating empathy into the curriculum may be more of a “restoration project” than one of inculcation (Spiro 1992). In other words we should build on students’ existing empathic strengths, their natural human impulses toward identifying with others, impulses that currently are all too often stifled and repressed in the existing medical culture.

Curricular approaches to teaching empathy should aspire to what bioethicist Jodi Halpern almost a decade ago called “clinical empathy” (Halpern 2001). Clinical empathy derives from a detailed experiential as well as cognitive understanding of what the patient is feeling. It is neither detachment nor immersion but, rather, an ongoing double movement of emotional resonance and compassionate curiosity about the meaning of the clinical situation to the patient (Shapiro 2007). This form of empathy involves the capacity to participate deeply in the patient’s experience while not losing sight of the fact that this imaginative projection is not, in fact, one’s own experience but that of another. In a similar formulation the clinician must possess the negative capability not to be emotionally overwhelmed by the patient’s plight while simultaneously being moved by his/her suffering (Coulehan 1995). Neuroscience research confirms that awareness of a distinction between the experiences of self and others constitutes a crucial aspect of empathy. For empathy to be effective individuals must be able to separate their own feelings from the feelings shared with others, so must have self-awareness as well as other-awareness (Decety and Lamm 2006). Without self-awareness physicians lose perspective, and they experience empathy as a liability. Self-aware physicians, on the other hand, experience empathy as a mutually healing connection with patients (Kearney et al. 2009).

A Culture of Empathy

By making room for emotions and a practice of empathy that honors its emotion-based dimension, we might change other aspects of the culture of medicine as well. For example, instead of the emotional detachment routinely encouraged in clinical interactions, we might see physicians and students alike being willing to develop “compassionate solidarity” with the patient’s suffering (Coulehan 2009a), an attitude which Coulehan describes as one comprised of presence, listening, affirmation, and witnessing. Rather than defending against their patients’ distress, from a position of empathy physicians could learn to recognize their own vulnerability to suffering and therefore be willing to connect with others, including most radically their patients.

Doctors and patients share in common uncertainty, suffering, sickness, and death (Fantus 2008). Yet Charon has observed that although patients and doctors both suffer, their suffering seems parallel and disconnected (Charon 2006). Rather than pull away from the suffering of their patients, in a futile attempt to emotionally protect and insulate themselves, doctors who adopted an attitude of empathy could acknowledge their similarities with their patients because they could see themselves in their patients’ suffering. Instead of distance and objectivity, such physicians could embrace attitudes of affiliation and alliance with patients (Charon 2008). They would be ready, indeed eager and unafraid, to share some small portion of the burdens under which their patients labor, and they would be able to hear their patients’ laments without flinching (Bub 2004).

In this empathic medical culture physicians would value and cultivate self-awareness of their own thoughts and feelings, countertransference, and emotional labor (Larson and Yao 2005). They would be interested in developing “insight into how one’s life experiences and emotional makeup affect one’s interactions with others” and would be able to engage in personal calibration of their own emotional responses to patients (Novack et al. 1997). Such a culture would promote role modeling in physicians that was both self-aware and reflexive—outstanding physicians would bring awareness and critical examination to their own behavior and would be able, for example, to reflect on and illuminate for students how empathy was being created and expressed in any given clinical encounter (Kenny, Mann, and MacLeod 2003). From these role models students would learn that their impulses to connect with their patients are valid and appropriate, rather than foolishly naive (Reisman 2006).

Conclusion

Medicine has tried to have it both ways as far as empathy is concerned. It has acknowledged empathy as an essential cornerstone of the patient-doctor relationship, but it has tried to cleanse empathy of its emotional underpinnings and define it as a purely

cognitive-behavioral skill. This is because the emotions of patients and their own emotions seem confusing, overwhelming, unpredictable, and therefore difficult to manage to practitioners schooled in the reductive positivism of the sciences. As a result medical culture has, perhaps unwittingly, promoted attitudes of detachment and distance rather than empathy in both practitioners and learners. Alternatively, medical culture and medical education might consider acknowledging that emotional reactions are an integral—and indeed, potentially valuable—part of clinical practice. Their patients' emotions and their own in large part define how the meanings and implications of biophysical disease are processed and decided on, how treatment decisions are made, and how adherence plays out in daily life. By paying attention to emotions, how to identify them and how to make determinations about what emotional responses are most beneficial to the patient, students and clinicians alike will be able to become familiar and comfortable with the expression of empathy. In fact their willingness to feel and convey empathy may even have the effect of shifting the culture of medicine toward one anchored in attitudes of compassionate solidarity, affiliation, and alliance toward patients.

Note

1. Even medical humanities scholars are likely to describe empathetic imagination as a purely “cognitive skill that helps one to imagine the experiences and responses of another” (Case and Brauner 2010, although these authors also caution against “surface acting” or performance in executing empathic skills).

References

- Anderson, M. B., J. J. Cohen, J. E. Hallock, D. G. Kassebaum, J. Turnbull, and M. E. Whitcomb. 1998. The Medical Student Objectives Project. Washington, D.C.: Association of American Medical Colleges.
- Balint, M. 2000 [1957]. *The Doctor, His Patient and the Illness*, 2nd ed. London: Churchill Livingstone.
- Batson, C. D., J. G. Batson, J. K. Singlsby, K. L. Harrell, H. M. Peekna, and R. M. Todd. 1991. Empathic joy and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology* 61: 413–426.
- Benbassat, J., and R. Baomal. 2001. Teaching doctor patient interviewing skills using an integrated learner and teacher-centered approach. *American Journal of the Medical Sciences* 322: 349–357.
- Benbassat, J., and R. Baomal. 2004. What is empathy, and how can it be promoted during clinical clerkships? *Academic Medicine* 79: 832–839.

- Brockmeier, J. 2008. Language, experience, and the “traumatic gap”: how to talk about 9/11. In *Health, Illness, Culture: Broken Narratives*, edited by L.-C. Hyden and J. Brockmeier, 16–35. New York: Routledge.
- Bub, B. 2004. the patient’s lament: Hidden key to effective communication: How to recognize and transform. *Journal of Medical Ethics* 30: 63–69.
- Bulow, P. 2008. “You have to ask a little”: troublesome storytelling about contested illness. In *Health, Illness, Culture: Broken Narratives*, edited by L.-C. Hyden and J. Brockmeier, 131–153. New York: Routledge.
- Case, G. A., and D. J. Brauner. 2010. The doctor as performer: a proposal for change based on a performance studies paradigm. *Academic Medicine* 85: 159–163.
- Charon, R. 2001. Narrative medicine: a model for empathy, reflection, profession, and trust. *JAMA* 286: 1897–1902.
- Charon, R. 2006. *Narrative Medicine: Honoring the Stories of Illness*. New York: Oxford University Press.
- Charon, R. 2008. What to do with stories. In *Appendix: A Journal of the Medical Humanities. The Medical School for International Health* 2: 42–49.
- Coulehan, J. 1995. Tenderness and steadiness: emotions in medical practice. *Literature and Medicine* 14: 222–236.
- Coulehan, J. 2005. Viewpoint: Today’s professionalism: Engaging the mind but not the heart. *Academic Medicine* 80: 892–898.
- Coulehan, J. 2009a. Compassionate solidarity: Suffering, poetry, and medicine. *Perspectives in Biology and Medicine* 52: 585–603.
- Coulehan, J. 2009b. Rescuing empathy. *Literature, Arts, and Medicine Blog*, Nov. 30. <<http://medhum.med.nyu.edu/blog>>.
- Coulehan, J. and P. C. Williams. 2001. Vanquishing virtue: The impact of medical education. *Academic Medicine* 76: 598–605.
- Crandall, S. J., and G. S. Marion. 2009. Commentary: Identifying attitudes towards empathy: An essential feature of professionalism. *Academic Medicine* 84: 1174–1176.
- Davis-Floyd, R., and G. St. John. 1998. *From Doctor to Healer: The Transformative Journey*. Piscataway, NJ: Rutgers University Press.
- Decety, J., S. Echols, and J. Correll. 2009. The blame game: The effect of responsibility and social stigma on empathy for pain. *Journal of Cognitive Neuroscience* 22: 985–97.
- Decety, J., and C. Lamm. 2006. Human empathy through the lens of social neuroscience. *TheScientificWorldJournal* 6: 1146–1163.

- Decety, J., and M. Meyer. 2008. From emotion resonance to Empathic Understanding: A Social Developmental Neuroscience Account. *Development and Psychopathology* 20: 1053–1080.
- Dyrbye, L. N., M. R. Thomas, and T. D. Shanafelt. 2005. Medical student distress: Causes, consequences and proposed solutions. *Mayo Clinic Proceedings* 80: 1613–1622.
- Eisenberg, N., R. A. Fabes, B. Murphy, M. Karbon, P. Maszk, M. Smith, C. O'Boyle, and K. Suh. 1994. The relations of emotionality and regulation to dispositional and situational Empathy-Related Responding. *Journal of Personality and Social Psychology* 66: 776–797.
- Evans, B. J., R. O. Stanley, and G. D. Burrows. 1993. Measuring medical students' empathy skills. *British Journal of Medical Psychology* 66: 121–133.
- Fantus, C. 2008. Looking into the eyes of others: Towards a poesis of narrative medicine. *Appendix: A Journal of the Medical Humanities. The Medical School for International Health* 2: 35–41.
- Foster, W., and E. Freeman. 2008. Poetry in general practice education: Perceptions of learners. *Family Practice* 25: 294–303.
- Frank, A. W. 2008. Caring for the dead: Broken narratives of internment. In *Health, Illness, Culture: Broken Narratives*, edited by L.-C. Hyden and J. Brockmeier, 122–130. New York: Routledge.
- Fuentes, J. N., L. S. Boylan, and J. A. Fontanella. 2009. Behavioral indices in medical care outcome: The working alliance, adherence and related factors. *Journal of General Internal Medicine* 24: 80–85.
- Hafferty, F. W. 1988. Cadaver stories and the emotional socialization of medical students. *Journal of Health and Social Behavior* 29: 344–356.
- Hafferty, F. W., and R. Franks. 1994. The hidden curriculum, ethics teaching, and the structure of medical education. *Academic Medicine* 69: 861–871.
- Halpern, J. 2001. *From Detached Concern to Clinical Empathy: Humanizing Medical Practice*. New York: Oxford University Press.
- Halpern, J. 2003. What is clinical empathy? *Journal of General Internal Medicine* 18: 670–674.
- Hanna, M., and J. J. Fins. 2005. Power and Communication: Why simulation training ought to be complemented by experiential and humanist learning. *Academic Medicine* 81: 265–270.
- Henry-Tillman, R., L. A. Deloney, M. Savidge, C. J. Graham, and V. S. Klimberg. 2002. The medical student as patient navigator as an approach to teaching empathy. *American Journal of Surgery* 183: 659–662.
- Hojat, M. 2009. Ten approaches for enhancing empathy in health and human services cultures. *Journal of Health and Human Services Administration* 31: 412–450.

- Hojat, M., M. J. Vergare, K. Maxwell, G. Brainard, S. K. Herrine, G. A. Isenberg, J. Veloski, and J. S. Gonnella. 2009. The devil is in the third year: A longitudinal study of erosion of empathy in medical school. *Academic Medicine* 84: 1182–1191.
- Hyden, L.-C. 2008. Broken and vicarious voices in narratives. In *Health, Illness, Culture: Broken Narratives*, edited by L.-C. Hyden and J. Brockmeier, 36–53. New York: Routledge.
- Irvine, C. 2009. The ethics of self-care. In *Faculty Health and Academic Medicine: Physicians, Scientists, and the Pressure of Success*, edited by T. Cole, T. Goodrich, and T. Gritz, 127–146. New York: Humana.
- Jennings, M. L. 2009. Medical student burnout: Interdisciplinary exploration and analysis. *Journal of Medical Humanities* 30: 253–269.
- Joyce, B. Introduction to Competency-Based Residency Education. ACGME Outcome Project: Educating Physicians for the 21st Century, 2006. Available at http://www.acgme.org/outcome/e-learn/Physician_21M1.ppt (accessed March 27, 2011).
- Karnieli-Miller, O., R. Vu, M. C. Holtman, S. G. Clyman, and T. S. Inui. 2010. Medical students' professionalism narratives: A window on the informal and hidden curriculum. *Academic Medicine* 85: 124–133.
- Kearney, M. K., R. B. Weininger, M. L. Vachon, R. L. Harrison, and B. M. Mount. 2009. Self-care of physicians caring for patients at the end of life: "Being connected... a key to my survival." *Journal of the American Medical Association* 301: 1155–1164, E1.
- Kenny, N. P., K. V. Mann, and H. MacLeod. 2003. Role modeling in physicians' professional formation: reconsidering an essential but untapped educational strategy. *Academic Medicine* 78: 1203–1210.
- Kim, S. S., S. Kaplowitz, and M. V. Johnston. 2004. The effects of physician empathy on patient satisfaction and compliance. *Evaluation & the Health Professions* 27: 237–251.
- Krasner, M. S., R. M. Epstein, H. Beckman, A. L. Suchman, B. Chapman, C. J. Mooney, and T. E. Quill. 2009. Association of an educational program in mindful communication with burnout, empathy, and attitudes among Primary Care Physicians. *Journal of the American Medical Association* 302 (12): 1284–1293.
- Larson, E. B., and X. Yao. 2005. Clinical empathy as emotional labor in the patient-physician relationship." *Journal of the American Medical Association* 293 (9): 1100–1106.
- Levinas, E. 2005. *Humanism of the Other*. translated by N. Poller. Champaign: University of Illinois Press.
- Mattingly, C. 2008. Stories that are ready to break. In *Health, Illness, Culture: Broken Narratives*, edited by L.-C. Hyden and J. Brockmeier, 73–98. New York: Routledge.
- Medved, M. I., and J. Brockmeier. 2008. Talking about the unthinkable: neurotrauma and the "catastrophe reaction." In *Health, Illness, Culture: Broken Narratives*, edited by L.-C. Hyden and J. Brockmeier, 54–72. New York: Routledge.

- Meitar, D., O. Karnieli-Miller, and S. Eidelman. 2009. The impact of senior medical students' personal difficulties on their communication patterns in breaking bad news. *Academic Medicine* 84: 1582–1594.
- Newton, B. W., L. Barber, J. Clardy, E. Cleveland, and P. O'Sullivan. 2008. Is There Hardening of the heart during medical school? *Academic Medicine* 83: 244–249.
- Novack, D. H., A. L. Suchman, W. Clark, R. M. Epstein, E. Najberg, and C. Kaplan. 1997. Calibrating the physician: Personal awareness and effective patient care. Working Group on Promoting Physician Personal Awareness, American Academy on Physician and Patient. *Journal of the American Medical Association* 278: 502–509.
- Pence, G. E. 1983. Can compassion be taught? *Journal of Medical Ethics* 9: 189–191.
- Pollack, K. I., R. M. Arnold, A. S. Jeffreys, S. C. Alexander, M. K. Olsen, A. P. Abernethy, C. Sugg Skinner, K. L. Rodriguez, and J. A. Tulskey. 2007. Oncologist communication about emotion during visits with patients with advanced cancer. *Journal of Clinical Oncology* 25: 5748–5752.
- Reis, S. P., H. S. Wald, A. D. Monroe, and J. M. Borkan. 2010. Begin the BEGAN (The Brown Educational Guide to the Analysis of Narrative) - A framework for enhancing educational impact of faculty feedback to students' reflective writing. *Patient Education and Counseling* 80: 253–259.
- Reisman, A. B. 2006. Outing the hidden curriculum. Hastings Center Report. 36: 9.
- Shapiro, J. 2002. How do physicians teach empathy in the primary care setting? *Academic Medicine* 77: 323–328.
- Shapiro, J. 2007. Using literature and the arts to develop empathy in medical students. In *Empathy in Mental Illness*, edited by T. F. D. Farrow and P. W. R. Woodruff, 473–94. Cambridge: Cambridge University Press.
- Shapiro, J., J. Coulehan, D. Wear, and M. Montello. 2009. Medical humanities and their discontents: Definitions, critiques, and implications. *Academic Medicine* 84: 192–198.
- Shapiro, J., L. Rucker, J. Boker, and D. Lie. 2006. Point-of-view writing: A method for increasing medical students' empathy, identification and expression of emotion, and insight. *Educ Health (Abingdon)* 19: 96–105.
- Spiro, H. 1992. What is empathy and can it be taught? In *Empathy and the Practice of Medicine: Beyond Pills and the Scalpel*, edited by H. Spiro, E. Peschel, M. G. McCrea Curnen, and D. St. James, 7–14. New Haven, CT: Yale University Press.
- Stepien, K. A., and A. Baernstein. 2006. Education for empathy: A review. *Journal of General Internal Medicine* 21: 524–530.
- Suchman, A. L., K. Markakis, H. B. Beckman, and R. M. Frankel. 1997. A model of empathic communication in the medical interview. *Journal of the American Medical Association* 277: 678–682.

Wear, D., and J. Zarconi. 2007. Can compassion be taught? Let's ask our students. *Journal of General Internal Medicine* 23: 946–953.

Winefield, H. R., and A. Chur-Hansen. 2000. Evaluating the outcome of communication skill teaching for entry-level medical students: Does knowledge of empathy increase? *Medical Education* 34: 90–94.

Winseman, J., A. Malik, J. Morison, and V. Balkoski. 2009. Students' views on factors affecting empathy in medical education. *Academic Psychiatry* 33: 484–491.