

Virtual Mentor

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From the Editor

In search of the art of healing in modern medicine

Hospitals often advertise their state-of-the-art technology as an incentive for patients to choose their facility over a competitor, presumably on the assumption that technology is the highest good medicine has to offer. In this issue of *Virtual Mentor* we look beyond technology, posing the question, “What is the state of the *art of healing* in modern medicine?”

If we, as health care professionals and educators listen carefully to the world around us we may have reason to believe that our art needs some improving. In newspapers, television, radio, family gatherings and doctors’ offices, the public expresses its distrust, cynicism, dissatisfaction and disappointment with our health care system.

This dissatisfaction threatens to erode public trust in physicians and forces us to ask: how can we heal our patients without their trust? Furthermore, how do doctors overcome numerous obstacles to practicing the art of medicine such as less time to spend with each patient, more time spent on defensive medicine practices and never-ending paperwork requirements? As medical educators how do we teach tomorrow’s physicians the art of healing and impress its value upon them? This month’s expert commentators tackle these questions from various perspectives in our clinical cases.

Many factors influence the vigor with which the art of healing can be taught and practiced in medical settings. The journal article under discussion argues that medical students must be taught to understand the dual physician roles of professional and healer. Our policy forum addresses the potential impact of resident work-hour restrictions on the art of healing. The op-ed contributors debate whether testing for emotional intelligence—EI—in medical school applicants would help identify those who are more apt to be good communicators and reflective physicians with natural empathy for others. The clinical pearl offers guidance for how the power of the individual physician can preserve the art of healing in every patient encounter. Taking a different approach to the balance between the art and science of healing, the medicine and society section explains statistical prediction rules (SPRs) and asks why, given their record of equaling or surpassing physicians’ decision-making accuracy, the acceptance and use of SPRs has been so limited.

The clinical cases examine some of the many aspects of 21st-century health care delivery in the U.S. that interfere in the patient-physician relationship. These may

take the form of a pager that does not stop beeping, a patient who is skeptical of the medical profession or even a young medical student's struggle to balance the art of healing with technical ability. Whatever those barriers, it is the duty of treating physicians to ensure that they do not detract from their relationships with their patients. This task is by no means simple, and mindful practice of the art of medicine is an essential ingredient in accomplishing it. Strong patient-doctor relationships help us heal our patients. Healing consistently and dependably—even when we cannot cure—will improve the state of our art and the value of our profession.

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Clinical Case

Can healers have private lives?

Commentaries by Alexia M. Torke, MD, and G. Caleb Alexander, MD, MS, and by Howard Liu, MD, and Michelle B. Riba, MD, MS

At 3:00 on Friday afternoon Clair Snell, MD, a highly regarded psychiatrist with a passion for patient care, was having a bad day. She had just received a second page interrupting her examination of Mr. Dodge, an outpatient in her hospital-based practice. The first page, coming shortly before Mr. Dodge's appointment, had been the ER requesting that Dr. Snell admit a patient with full-blown mania to the psychiatry inpatient unit. She could not help but sigh as she saw that the second page was also from the ER, most likely with regard to this earlier case. Sufficiently distracted from Mr. Dodge, who suffers from paranoia, she excused herself and answered the call. The ER physician informed her that the patient was now preparing to leave the hospital "against medical advice." Dr. Snell told the ER physician to persuade the patient to remain in the hospital until she could come down and talk with her again. Dr. Snell then returned to complete her appointment with Mr. Dodge.

One hour later, after successfully persuading the reluctant patient to remain in the hospital, Dr. Snell retreated to her office. Here she found messages asking her to return calls to a disability agency (to advocate for short-term disability for a patient with severe depression), an HMO physician reviewer (to make a case for authorizing continued inpatient stay for a heavily pregnant woman addicted to cocaine) and a pharmacy (to authorize an urgent prescription refill requested after Dr. Snell's staff had left for the night). Glancing at her e-mail she saw a message from the medical director reminding her to complete her online HIPAA training ASAP.

Dr. Snell checked her watch and saw that, for the second time this week, she had missed dinner. Her 2-year-old daughter had recently begun asking, "Where is mommy?" during the meal. She felt an all too familiar pang of guilt and plowed through the tasks before her, hoping to be home at least in time to give her daughter a bath. Just as she began to pack up for the night the answering service paged her. Mr. Snyder, the son of a patient, was requesting that she call him before 7:00 that evening. This particular family member was a busy executive and would offer only a 1-hour period per day during which she could return his call, and these times varied from day to day. One day when she had not returned his call he had left her an irate voicemail and it had taken Dr. Snell the better part of an hour to "de-escalate" him. She understood that he was scared because his mother was so ill and that calling her

physician for detailed daily briefings was his way of staying connected. Under less-stressful circumstances Dr. Snell was happy to handle these complex family dynamics, but today she felt she was being forced to make a choice: stay and “heal” this family member or leave and devote some attention to her own.

Commentary 1

by Alexia M. Torke, MD, and G. Caleb Alexander, MD, MS

If I am not for myself,
Who will be for me?
If I am only for myself,
What am I?
If not now,
when?
—Hillel

Dr. Snell’s situation may feel painfully familiar to many medical students and physicians. All too often physicians face the challenge of balancing their own health and well-being with the near-limitless demands of the clinical setting. Accepting that physicians cannot “do it all” can be difficult; physicians rightly care deeply for their patients, and many are also high achievers who are prone to perfectionism. Women physicians may find these concerns especially difficult, as they attempt to maintain busy careers and fulfill traditional expectations of motherhood. In general, women physicians work fewer hours per week than men [1] and are more likely to work part-time, citing family responsibilities as the main reason for doing so [2]. The increasing presence of women in medicine may be leading to greater equilibrium between work and family life for everyone within the medical profession [3]. Nevertheless, inevitable challenges will occur when physicians of both sexes must carefully balance their careers and personal lives.

In this case, Dr. Snell is being forced to make difficult choices about how to allocate her time. The competing options outlined in the case are all worthwhile actions—immediate patient care, communication with a patient’s family, advocacy in health and governmental systems for her patients, and the care of her own family. While the particulars may change over the years, the fact remains that there is an endless amount of good a physician can do, so each physician must set limits. Where should the psychiatrist in this case draw the line? Are there any ethical principles that can guide her?

Much attention has been focused on the conflicts of interest that physicians may face. For example, there may be tension between a physician’s research goals, which involve maximizing patient enrollment in a clinical trial, and the best interests of his or her particular patient, which may not be served by participating in the research. Similarly, physicians face conflicting obligations. Special relationships such as those with a child, a spouse or a patient involve unique obligations. Thinking about how to balance these obligations may help Dr. Snell navigate these difficult choices.

When a physician faces a conflict between interests or obligations, he or she should ask three key questions [4]. First, is the conflict avoidable? Second, are the competing interests legitimate? Third, are the interests reasonable?

Is the conflict avoidable?

Dr. Snell seems forced to choose between calling back the family member, Mr. Snyder, for what will probably be a lengthy conversation at the time he requests and going home to be with her daughter before bed. In this case, the conflict is unavoidable because Dr. Snell has obligations both to her child and to her patient and patient's family.

Are the competing interests legitimate?

Mr. Snyder's request to speak to Dr. Snell is legitimate because, assuming a patient's approval, communication with a concerned family member is an important part of patient care. Mr. Snyder may be genuinely interested in his mother's well-being. Also, Dr. Snell may regard caring for families—and not just individual patients—a part of her role as a physician.

Are the interests reasonable?

In this case, the son's request does not appear reasonable. Mr. Snyder's request to be called daily during a given one-hour time period is extremely burdensome. Dr. Snell is a busy professional too; she need not put Mr. Snyder's needs and wants above those of all other patients and her family. In such a situation, the physician could respond to the request by setting clear guidelines for how and when she can be contacted and making a great effort to stick to her own commitment to be available. For example, Dr. Snell could ask Mr. Snyder to schedule a time to talk in advance, via her secretary, and could establish a time of day after which she could only be contacted in emergencies. Working to establish healthy boundaries is not only good for the physician, it can be helpful for patients and their families too.

Our second-best world

These three questions form a helpful framework for resolving many apparent moral dilemmas—but not all. Sometimes, conflicts cannot be avoided; competing interests are legitimate and reasonable.

When this happens, physicians must work to focus their efforts where they will be best spent. Beneficence, or the obligation to act for the benefit of the patient, would seem to be a key consideration in determining where one's efforts would be best spent [4, 5]. But even the concept of beneficence cannot fully resolve these dilemmas; sometimes the need is so great that it requires more “goodness” than the physician can dispense. Just as bedside rationing, while common and some would argue necessary, occurs despite physicians' discomfort with the concept [6], so physicians must also decide how to “ration” their limited time. Concepts of fairness and utility can be helpful in thinking about this. In each case Dr. Snell must evaluate the potential benefits and harms that would come from meeting a patient's need,

putting it off until a future time or refusing to meet the need. Some situations are clearly emergencies: if the last patient of the day has worrisome chest pain while in the office, of course the doctor will stay late—to do otherwise would be dereliction of duty. Other situations must be met creatively with compromises that maximize benefit for patients, the physician's family and the physician herself.

The other activities of Dr. Snell's work day range from admitting unscheduled emergency patients and seeing her scheduled patients, to talking with insurance companies, disability agencies and family members. Some redesign at the practice level, such as changing reimbursement to include payments for e-mails or phone calls, may help to address isolated challenges that physicians face in allocating and accounting for their time. Several professional organizations have proposed new practice models involving these types of changes [7-9]. Yet new systems of reimbursement or methods of practice redesign will never eliminate all of the conflicting obligations that physicians face. Dr. Snell's tough choices are certainly shaped by social forces. But even in a redesigned practice, time demands will always require physicians to make difficult choices and face the limits of being human.

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Commentary 2

by Howard Liu, MD, and Michelle B. Riba MD, MS

Psychiatrists often advise patients to seek a balanced life. But even as we do so, our gaze turns to our own piles of unfinished charts, unanswered invitations and looming deadlines. Whether one works in an academic or private practice setting, there never seems to be enough time to satisfy obligations at work and at home. The equilibrium is always delicate, tipping heavily toward professional duties during the week and springing back toward our private lives on weekends. It is an important struggle because lack of balance can limit the longevity of one's career. A recent study showed that dissatisfied physicians are two to three times more likely to leave medicine than satisfied physicians [1]. This article will review some of the competing forces which affect the satisfaction of a practicing psychiatrist: patient care, managed care and our personal lives.

Patient care

When we graduate from medical school, we promise to care for our patients to the best of our abilities. Ideally, that would mean that we could shut our pagers off and devote our full attention to each patient. Pragmatically, however, competing demands on our time require psychiatrists to adopt a triage mentality. This involves deciding which patients need immediate intervention and which can be sent to the proverbial waiting room. In our vignette, Dr. Snell is able to triage both her hospitalized patient and her outpatient in one busy afternoon.

But multi-tasking has its limits, and there are situations when all of us are stretched to the breaking point. Dr. Snell must try to manage a patient's persistent family member who expects more time from her than she can grant. When we have reached this point, it is best to acknowledge it to ourselves and our patients. If we explain our time constraints to patients, most of them are surprisingly empathic. Once an understanding is reached, then flexible compromises can be considered. In our case, Dr. Snell could ask for help from a social worker or communicate by e-mail from home. In the long run, knowing one's limits and asserting them is a necessary aspect of avoiding burnout.

Managed care

In the hierarchy of competing demands, managed care is a daily factor in most psychiatrists' (and, in fact, most physicians') lives. Unless psychiatrists run fee-for-service practices, they must communicate with HMOs and insurance companies for reimbursement. In the last two decades, managed care has led to specific changes in

both inpatient and outpatient psychiatry, with inpatient stays becoming generally shorter and less frequent than they were in the past [2-5]. Accordingly, the number of patients who use outpatient mental health services has increased [6, 7]. This has led to mixed results in the quality of care delivered under managed mental health care [8].

As the system has changed, psychiatrists have faced new limits on their ability to obtain needed services for their patients. The Community Tracking Study Physician Survey found that psychiatrists were less likely than other specialists to say that they were able to deliver high-quality care [9]. Upon closer examination of this data, Edlund and colleagues found that the major inhibiting factors were inability to secure hospitalizations in nonemergency situations and adequate length of stay [8]. However, we must not accept this current practice environment without seeking greater parity for reimbursement of mental health services. Psychiatrists retain an important role as patient advocates because many of our patients are not be able to argue their own cases. Although there is a direct cost in time and convenience, we must remain proactive in our communications with managed care companies.

Private lives

The most poignant part of this vignette is the disappointment that Dr. Snell feels in missing another dinner with her daughter. In a profession where we carry the burdens of our patients, we often fail to assess the quality of our own private lives. Recently, however, this issue has arisen in the context of resident work hours and women in medicine. For decades, resident physicians worked long hours with little regard to safety or quality of life. In 2003, however, the Accreditation Council for Graduate Medical Education restricted resident work schedules to 80 hours a week [10]. The intent was to limit sleep deprivation and thus increase patient safety, resident education and resident quality of life. A systematic review of these changes by Fletcher and colleagues in 2005 found mixed results [10]. In internal medicine, residents generally obtained more sleep but reported variable levels of stress under the new system. In psychiatry, a single study of a night float system (a system where one or more residents work night shifts to cover patient care) found a mean improvement in well-being, education and clinical duties [11]. Although data are still emerging, the resident work-hour restriction suggests a new consciousness of the need for quality of life during training.

Gender also affects physician quality of life. Studies have shown that lack of control at work is a strong predictor of burnout in women physicians [12, 13]. Other articles have detailed the inherent tension between academic medicine careers that expect the greatest productivity exactly during a woman's child-raising years [14]. Roberts and Hilty offer some advice to women in academic psychiatry in their *Handbook of Career Development in Academic Psychiatry and Behavioral Sciences*. They suggest finding a mentor, negotiating protected time, aligning research interests with clinical duties and knowing when to say no to time consuming duties [15]. For other women physicians, part-time or shared positions may be a solution, especially if they have young children. Studies have shown that part-time physicians have higher

productivity than their full-time colleagues [16-18] and achieve equal or higher quality performance [19]. Overall, there is no simple solution, and individual compromises must be reached between career goals and family.

Conclusions

As we train a new generation of medical students and residents, there are important lessons to teach in the pursuit of a balanced life. In patient care, we must learn to triage our time, depend on colleagues and recognize our limits if we are to avoid burnout. In the managed care environment, we must remain proactive in protecting patient welfare and obtaining necessary services. Finally, we should continue the trend toward resident well-being and negotiate compromises between career and private lives. Overall, we must not be afraid to address our own needs and should not sacrifice our families for the sake of our patients. As Graham Jackson stated, “No doctor on his deathbed wished he/she had spent more time in the clinic.... Now and in the years to come find the time to take care of yourself for your own sake and that of your nearest and dearest” [20].

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Related articles

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Clinical Case

Can there be healing without trust?

Commentary by Joseph B. Layde, MD, JD

Dr. Burton is an internist at a student health center. Julie Stoddard, a freshman at the college, made an appointment for an initial medical evaluation. It was flu season and Dr. Burton was running 30 minutes late. He apologized for the delay immediately after introducing himself to his new patient. He asked Julie routine medical questions, thinking to himself that she was rather disengaged. Julie reported a recent onset of gastrointestinal cramping, bloating and constipation which caused her to miss classes. Midway through the medical history, she matter-of-factly told Dr. Burton, "I'm just here for a sick note." Dr. Burton patiently explained to Julie that he needed to collect further medical information to complete the evaluation. Julie reluctantly acquiesced, and Dr. Burton discovered that her father had died in a motor vehicle accident two years before, and this had led to some significant financial stress.

Following the interview and physical exam Dr. Burton diagnosed Julie with irritable bowel syndrome. He educated her about the condition and made some treatment recommendations including a prescription drug. Julie stated she had been surfing the Web, figured that was her diagnosis and ordered a month's supply of several herbal supplements for approximately \$50 because she knew she could not afford the copay for Dr. Burton's prescriptions.

Later, when Dr. Burton discussed this case with the clinic nurse he learned that Julie's father had actually been in a relatively minor car accident in which he had sustained a fractured femur. His death, Dr. Burton discovered, had been the result of preventable medical complications during surgery. The surgeon in this case was known in the medical community for his brusque interpersonal manner and his cavalier approach to patient care. According to the clinic nurse, the outcome of the case was widely known to have been avoidable, but no one on the treatment team had discussed the situation forthrightly with Julie's mother. The family suspected that someone was to blame and had been very upset by the apparent cover-up. Dr. Burton was sure his patient's previous experiences with the medical profession had affected her ability to trust him as her internist.

One month later Dr. Burton notices Julie's name on his afternoon clinic schedule and wonders how he should address what he has learned.

Commentary

The trust a patient holds in the medical profession informs all aspects of her relationship with every physician she encounters. This scenario illustrates how a breakdown in trust can damage a patient's relationship with a physician who was completely uninvolved in the clinical situation that led to the rupture.

In a thoughtful discussion of what makes the patient-physician relationship special, John Bruhn characterized trust as “the glue that bonded physicians and patients” and worried that “the glue has become a rubber band” [1]. The fact that patients and their families have contact with an increasing number of physicians within the fragmented U.S. medical system means that less personal, less durable ties bind doctors and patients [1]. In this case, the deeply troubling experience that Julie Stoddard and her family had with her father's surgeon lessens her willingness to form a relationship with Dr. Burton. When medical specialization and patient mobility were not as pronounced as they are today, entire families might have gotten all of their medical care, including necessary surgery, from the same small town general practitioner. Today a patient is likely to have contact with many physicians, any one of whom can potentially spoil the atmosphere of trust between the patient and the medical profession as a whole.

Fortunately, there are things that physicians can do to enhance the patient-physician relationship, the most basic of which is to talk to patients in a caring way and discuss the specifics of their problems with them. Patient trust in primary care physicians has been shown to be associated with the physicians' behavior in eliciting and validating patients' concerns, inquiring about their expectations and responding to their emotional distress with empathic language [2-4]. Better relationships can lead to improved care. HIV-infected patients, for example, reported better adherence to antiretroviral therapy when they communicated well with and trusted their doctors and felt as though their doctors shared HIV-specific information with them and talked about the difficulty of following complicated antiretroviral regimens [5].

Dr. Burton now faces the dilemma of how to deal with Ms. Stoddard during her second clinic visit with him. Should he mention her rejection of his recommended prescriptions for irritable bowel syndrome and perhaps discuss the origin of her skepticism toward medicine? On the one hand, Dr. Burton may be able to give better care to Ms. Stoddard if he talks with her about what he has heard concerning her father's death and helps her to separate her distrust of her father's surgeon from her relationship with him. On the other hand, Ms. Stoddard may consider it an intrusion for Dr. Burton to presume to know the origin of her skepticism toward allopathic medicine, especially since he learned about her father's experience through a discussion with the clinic nurse and not from her.

Perhaps the best course for Dr. Burton would be to talk to Ms. Stoddard about her first clinic visit with him. Dr. Burton could ask how she is feeling. He could ask if there is anything about that visit she would like to discuss with him, including her feelings about the use of prescription medications and herbal supplements. Such an

approach would give her the opportunity to raise the subject of her family's bad experience with the medical profession if she chooses to do so. If she is willing to discuss her feelings toward doctors, Ms. Stoddard may be more likely to move beyond her distrust and to benefit from her visits with Dr. Burton. In turn Dr. Burton would be better able to use his professional skills to heal whatever ails his patient. If he cannot help his patient form a trusting relationship, he is likely to be reduced to a machine that cranks out "sick notes."

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Clinical Case

Putting it all together—the art and science of medicine

Commentaries by James N. Kirkpatrick, MD, and Hunter Groninger, MD

Raj Gupta is a fourth-year medical student completing a sub-clerkship in vascular surgery. His mentor, Dr. Hammond, is a highly respected surgeon with good technical skills and an established clinical researcher. Dr. Hammond has a gentle bedside manner; much of rounds is spent talking to patients and their families, educating them about specific diseases and reassuring them with positive, but realistic, assessments. In addition, he is a nurturing team leader, with high standards but generous praise.

Raj thinks he is doing a good job of establishing a trusting relationship with his patients. He has ample time to talk to them about their families, their overall health and their goals for the future. Raj is also a good listener; many patients feel comfortable talking with him, but he knows that he does not have the clinical answers so many of his patients are looking for. He is frustrated because his technical skills are still underdeveloped, and he knows that the time he spends perfecting his skills will take away from time with patients and their families. Raj wonders whether he can learn to be both compassionate at the bedside and technically versed.

Commentary 1

by James N. Kirkpatrick, MD

Raj already has grasped the skills that are most important when there are no answers to give. Patients who are nearing the end of life or facing illnesses for which medical hope has been exhausted need clinicians skilled in empathy and listening. It seems that Raj has matured beyond many of his peers in developing such skills, and he should be quite satisfied with his progress. Admittedly, this skill set is often marginalized by the medical mainstream. More accolades are won by reciting an exhaustive differential diagnosis or performing a procedure flawlessly than by demonstrating care and compassion for an emotionally distraught patient. Since technical healing and the art of healing are two sides of the medical care coin, we must “practice the latter without neglecting the former” [\[1\]](#).

Is good bedside manner important if physicians can cure patients with their technical experience?

“Good bedside manner” defies easy definition, but let us assume it involves the empathic listening skills described above, a demeanor that sets a patient at ease and demonstration of an active interest in the patient’s individuality. A simple answer to the question asked above is “yes,” not only because patients value good bedside manner—and comply with medical regimens more often and file lawsuits less often when it is present—but also because, for the most part, doctors do not really “cure” patients. What physicians mostly do is support, protect or encourage a patient’s own natural processes of restoration. Sometimes doctors modify or interfere with natural processes, but most of the time when trying to do so they merely exchange one disease for another. Even in cardiology, arguably the area of medicine that has recently done the most to avert mortality and morbidity and prolong life expectancy, cardiologists very often “rescue people from a relatively sudden death from myocardial infarction only to inflict on them a more prolonged death from progressive heart failure” [2]. Eventually there comes a time when science cannot stave off death or suffering, and the strict practitioner of medical science has nothing more to offer. But the practitioner of the art of healing *always* has something to offer in the form of attention, compassion, empathy and even wisdom.

A more nuanced answer about the importance of the art of medicine allows that there are probably some patients who really need and appreciate good bedside manner and others who simply want access to technical expertise. Physicians can play many different roles, depending on patient preferences and needs that are influenced by level of social support, their education, personality and degree of comfort and familiarity with the medical system. Not all patients want their physician to be reflective and empathic; some would not mind if physicians brusquely went about their business in a no-nonsense fashion, leaving expressions of compassion and empathy to close friends and family.

The difficulty lies in differentiating these patients from those that are “putting up a good front” but are really quite scared or suspicious. Being able to identify the latter type of patient is surely part of the art of medicine and requires a good bedside manner. Well-supported, confident and savvy patients may lose these attributes as their disease progresses and they find themselves desiring their physician’s compassion. I would argue that all patients need to have personal trust in their physicians and want to have their identities affirmed in the midst of illness.

How do we measure the art of healing in this technological age of medicine?

“Am I becoming good at the art of healing?” is a question I suspect medical students rarely ask. Nevertheless we should all seek to develop our “artistic side.” There is a real problem when there are no Dr. Hammonds to set the standard, either because students see or respect only the technical skills of their superiors or because superiors lack or do not value artistic skills. Furthermore, even if an attending physician models the art of healing well, interns and residents provide more proximate examples for emulation, and we know that students identify more closely with those

just above them. Artistically gifted interns and residents may be afraid of being labeled “touchy-feely.” During my own internship, a medical student on our team reflected on the respective abilities of my fellow intern and me. He was labeled as “smart” and I was identified as “nice.” Although I knew it was intended as a compliment, I felt insulted and deeply ashamed. I would, at that time, gladly have traded in the skills I had for the reputation of being “smart and mean.” I now see that “nice and smart” are not mutually exclusive.

As all medical students in the clinic years are aware, the most common way to measure something approximating the art of healing is through subjective evaluation by superiors. In addition to the inherent pitfalls of bias in subjective assessments, there are clearly variable levels of interest in the art of healing on the part of higher-level staff, especially in a medical climate that emphasizes medical detachment [3]. Interns, residents and attending physicians may fail to emphasize the importance and skills of art in their feedback because they do not know how to judge it. But myriad tools for assessment exist. In general, these tools focus on identifying undesirable physician communication behaviors such as dominating the conversation, showing disrespect or judgmentalism, employing leading or closed-ended questions, failing to explain medical terms in lay language and interrupting patients. Positive behaviors or skills include open-ended questioning, giving empathic verbal and nonverbal feedback, partnership building, shared problem solving, making appropriate eye contact, touching the patient appropriately, responding to patient cues and accurately summarizing what the patient has said. These skills can be evaluated in many ways, in both the first years of medical school and on the wards—scoring by trained observers, reports from simulated patients or peers, self-critique of video-taped sessions, tests that use computerized patient simulations, written assignments and patient satisfaction surveys [3-8]. On the wards, patients can be asked to assess student performance. Students can also evaluate themselves through written, self-reflective assignments.

Producing a “score” or “grade” for the student’s formal evaluation remains an inherent difficulty. Art in general does not lend itself easily to quantification, and the art of healing is no exception. One author has suggested that “grading” art-of-healing skills should rely more on approaches common to the critique of art by connoisseurs [9]. Medical schools could employ “connoisseurs” of the art of healing:

experts with knowledge, training, and experience in the interpersonal aspects of the art of medicine, allowing them to deconstruct concepts such as empathy, compassion, integrity, and respect into their respective key elements while evaluating physicians' behaviors as an integrated, cohesive whole [9].

These connoisseurs would provide feedback using a descriptive vocabulary that captured the full experience and not just sterile rankings or scores. Unfortunately, such experts may be a dying breed in an educational system that overemphasizes the science of medicine.

Does teaching good technical skills help tomorrow's physicians become good healers?

Patients' trust is usually grounded in their physician's technical expertise—most people don't go to the doctor for social reasons. In the initial patient-physician encounter, the technical expertise of the physician is assumed. No matter how politely a doctor behaves, a perception of incompetence will erode a patient's confidence and create a barrier to developing the therapeutic relationship. Purported practitioners of the art of healing who lack the requisite technical skills are not healers but charlatans. This is not to say that a limitation of knowledge or experience precludes effective healing. A general practitioner need not know how to perform complex surgery for a congenital heart defect to participate in the healing of a child who needs it, but she needs to know how to refer the child's parent to a good surgeon and how to provide continuing primary care within her area of expertise. Such a patient still needs age-appropriate preventive care and, of course, compassion.

At the start of every football game, the referee flips a coin to determine who gets the ball first. The coin of good medical care indeed has two sides, but they are not heads and tails. Technical expertise and the art of healing each have an established history and importance in medical practice; both are "heads." In days past, the technical side suffered from a lack of knowledge and little data to prove the efficacy of treatments. Often the physician had only a good bedside manner to offer. Technical expertise has come a long way and has farther to go. But in our modern enthusiasm to turn the technical face up, we must not neglect the art of healing. Though the two sides of the medical care coin garner attention from different circles, apply in various degrees to different patients, and are tested and measured by different means, the effective physician polishes both sides.

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Commentary 2

by Hunter Groninger, MD

Raj Gupta's dilemma is both philosophical and practical and certainly one that many medical students face. On the one hand, he knows he must continue to improve upon the technical skills necessary for providing good patient care—knowledge of disease pathophysiology, competence in diagnostic evaluation and current best practice methods for disease management—as well as an awareness of research developments in his clinical field. On the other hand, he has a keen sense of empathy and understanding of the patient-physician relationship and its central importance to practicing the art of healing. This case suggests that Raj understands these two components of patient care—technical skill (or the science of medicine) and what is referred to here as the “art of healing”—as somehow at odds with one another; too much time perfecting one aspect will detract from the other. How can such tension be resolved?

Ancient words: language matters

To propose that technical healing and bedside manner are two sides of the same coin might be using the wrong metaphor to address Raj's concerns. Rather than seeing these components of patient care as opposed to one another—on different sides of the coin—it is useful to reconsider the origins of such terms as “technical” and “art of healing” or “art of medicine.”

Around the fifth century B.C.E., when medical practice began to distinguish itself from pagan ritual, proponents argued that it be given a place among the disciplines called the *technai*. This word signified “art” or “craft” but also contained a concept of rigorous method; it is the origin of our word “technology” [1]. Among the works attributed to Hippocrates, a treatise entitled *De arte* includes a fierce defense of medicine's place among the *technai* because it is governed by specific principles. Hence, from the origins of Western medicine, we can find important epistemological links between notions of “technical skills” and the “art of healing”—one does not exist without the other.

At the same time that medicine became established among the *technai*, philosophers were eager to clarify the role of morals in medical practice. For example, if a physician cures a patient of a disease, does it matter whether the physician is moral? Or in another vein, does technical competence supersede virtuous behavior (either within or outside of clinical practice)? The Pythagoreans believed that being technically competent was not enough; the physician must also be a source of moral guidance, thus the origins of the Hippocratic oath [2].

In short, the language we use matters in how we conceptualize the work we do as physicians. Rather than distinguish technical prowess from bedside healing, it may be more accurate to consider these as necessary elements on a continuum of patient care. Just as a successful cholecystectomy requires both clean extraction of the diseased organ *and* good postoperative care, patient care *necessitates* both technical skill and bedside manner. These two concepts of “technical skill” and “art of healing” are not opposed at all; they should be considered part of caring for the whole patient.

Back to the present

How does this help Raj Gupta? Raj already exhibits a kind of reflective medical practice in that he is conscious of his place in the medical system, his interactions with patients and his own shortcomings. We are fortunate that such medical students exist, for we can at least rest assured that they will continue to push themselves to care for the whole patient and not just the clinical pathology.

Unfortunately in contemporary medical education, we often lack the ability to assess skills of caring for the whole patient. From the medical college admission test administered before medical school to the subspecialty board exams suffered after residency training, assessments tend to focus on the trainee’s ability to manipulate memorized clinical data. For some time now, many institutions have attempted to offset this with patient-focused educational programs. Often by employing standardized patients, narrative exercises or role playing, such programs have challenged students to improve interview techniques, bedside presence and empathic practice. The recent addition of the United States Medical Licensing Examination Step 2 Clinical Skills attempts to ensure that all medical students will be evaluated on patient interaction. Finally, the Accreditation Council for Graduate Medical Education-mandated professionalism competency for graduate medical education encourages similar efforts at the housestaff level.

But the simple fact remains that those intangible elements of patient care are just that—intangible. We still find it hard to agree on a definition of *professionalism*, much less measure it [3]. Arguably, even the development of quantitative tools such as the Jefferson Scale of Physician Empathy has done little to ensure that we can improve such subjective but important qualities as compassion [4].

The solution is staring Raj in the face

Perhaps the most important character in this case is Dr. Hammond. Here is an attending vascular surgeon who, by Raj’s account, possesses the notable attributes of good technical skill and gentle bedside manner. Dr. Hammond educates patients and families as well as his students; his leadership inspires a strong sense of teamwork and last but not least he attracts Raj’s admiration. In other words, Dr. Hammond has the makings of an excellent role model or mentor.

Mentors have a tremendous capacity to influence clinical practice [5]. I had one such experience with my attending physician on the general medicine service. One

Saturday when our team was on call, he asked the house officers if he could “borrow” me for the day. He explained that he had no other clinical duties that afternoon and that we could move from patient to patient together. He simply observed while I gathered medical histories, helped me perfect bedside exam skill and then listened carefully to my assessment and plan. He showed me how one must always sit at the level of the patient’s face and make some kind of physical contact—even if it was just a hand on a shoulder. These gestures, he told me, let patients know that you are interested in gaining their trust. At the same time, he was showing me that I could trust him as an educator.

At first glance, what I gleaned from this experience appeared centered on the patient-physician interaction, like the bedside manner that Raj considers. However, what surprised me much later was recognizing the impact that such mentoring had on my clinical acumen. Because of my respect for this attending physician—and the respect he gave me—I also sought to improve my clinical knowledge, to strive to perform at his level.

Many physicians can relate similar mentoring experiences that significantly influenced their education. In this case, Dr. Hammond appears no less able to foster Raj’s technical expertise and his bedside manner. Dr. Hammond seems an excellent example of what the term *attending* really implies: one who *waits by* or *is present for* the patient.

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Journal Discussion

For what ends do we promote medical professionalism?

by Nathan A. Bostick, MA, MPP

Cruess R, Cruess S. Teaching medicine as a profession in the service of healing. *Acad Med.* 1997;72:941-952.

Introduction

In their article “Teaching Medicine as a Profession in the Service of Healing,” authors Richard and Sylvia Cruess argue in favor of training physicians to better understand and abide by the tenets of medical professionalism. In preparing this argument, the authors examine the dual roles of contemporary physicians, which they refer to as those of the “physician healer” and the “physician professional” [1]. Citing recent criticisms levied against the profession, the authors conclude that physicians must better understand those roles and concurrent duties if they wish to effectively satisfy the public’s demands and maintain the benefit of professional autonomy.

The authors define a profession as a vocation characterized by the possession of a specialized body of knowledge and by commitment to service, often formalized through agreed-upon values or a code of ethics. Having delved into literature from social sciences and humanities, they identify several privileges and duties afforded to members of the medical profession. For example, physicians must act collectively to promote the public good while acting individually to promote patients’ welfare and to fulfill the fiduciary duties ascribed by the patient-physician relationship. In return, society rewards the medical profession with elevated status within the community and the ability to self-regulate [2].

The authors acknowledge that this reciprocal relationship between society and the medical profession has become increasingly strained within the last few decades. Their research suggests that the public has become skeptical of the individual physician’s ability to balance the altruistic goals of medicine against his or her own self-interests. Cruess and Cruess hypothesize that the public perceives that the collective profession is similarly guilty of remaining inactive on issues of societal concern, while instead engaging in activities that serve to protect the status and income of physicians [3]. The authors speculate that this loss of public trust has diminished the profession’s ability to self-regulate. The privilege of professional

autonomy has been further curtailed by changing market forces and increasing governmental intervention.

The authors conclude that the medical profession must undertake positive steps to re-establish public trust and thereby maintain the privilege to self-regulate [4]. They recommend that the profession actively educate physicians about the historical origins of professionalism and its present definition and accordant public responsibilities. Ultimately, this educational process should encourage the moral growth of medical students and physicians by establishing strong aspirational standards of individual conduct [5].

Why should physicians be educated about professional values and obligations?

Although this article provides an interesting perspective on the origins and development of our current conceptions of professionalism, some questions remain as to the proper ideological imperatives for educating physicians about professionalism. The authors build the case that educating physicians about the values and obligations of professionalism represents an endeavor essential to the retention of professional autonomy and self-regulation. However, their emphasis on maintaining professional autonomy as an end-goal appears to contradict the long-established goals of medical practice, including the promotion of health and societal well-being.

Proponents of continued self-regulation argue that the possession of specialized knowledge renders the profession better qualified than the lay public to determine the proper application of this knowledge [6]. This particular justification for the right to professional self-regulation, however, appears largely dated. Although physicians may have historically enjoyed a monopolistic hold upon medical information, that knowledge no longer remains under the exclusive control of the medical profession.

The advancement of medical knowledge has now emerged as a multidisciplinary endeavor. Moreover, current thought suggests that allowing nonprofessionals to access and even contribute to the body of available medical information effectively promotes societal welfare. Evidence indicates that the autonomous actions of physicians have resulted in the provision of divergent treatments for like medical conditions based on differences in the training and practice styles of individual physicians [7]. These deviations have led to systemwide variations in the use of medical services, medical expenses and patient outcomes [8]. In response, the involvement of nonphysicians, such as biostatisticians, economists and epidemiologists, in medical research has provided the profession with evidence-based practice guidelines that now enhance the safety and efficacy of medical care [9].

The singular pursuit of professional autonomy as an end unto itself does not necessarily enhance patients' welfare. It is the promotion of safe and efficacious care, and not the outright preservation of professional autonomy, that should be the

impetus for promoting professionalism among physicians. There are two important reasons why this is so. The first derives from the reciprocal relationship between the medical professions and society, which has invested heavily into individual physicians by the time they have joined the medical profession. In return for the funding of medical education and the granting of exclusive rights to practice medicine, the medical profession ostensibly owes society certain positive obligations [10]. The profession also owes a similar debt to patients who have volunteered the use of their bodies in teaching hospitals and have offered intimate accounts of their medical histories for the purposes of educating new physicians [11]. The fulfillment of these responsibilities to patients and society should supersede such self-serving goals as the enhancement of professional autonomy.

Secondary to any potential positive obligations that may or may not be owed to society, few would reject the virtue-based ethic that the medical profession is bound to promote the well-being of patients. Since Hippocratic times, the paramount purpose of medicine has been the promotion of health and alleviation of suffering [12]. Many aspects of the proposed professional curriculum enumerated by Cruess and Cruess will help physicians attain this goal. They suggest that the ideals of altruism and the promotion of patients' welfare should be emphasized within the profession and that physicians should be aware of relevant codes of professional conduct [13]. However, other goals such as the promotion of more transparent self-regulation and the reinforcement of the link between professional status and obligations to society make clear that the proposed curriculum is primarily intended to foster the public's trust in the medical profession, rather than a patient's trust in his or her own physician.

The trust between patient and physician must not be underemphasized when educating physicians about professionalism as it is fundamental to physicians' ability to promote patients' well-being [14]. Trust is essential to the patient-physician relationship insofar as patients must rely upon physicians for the information necessary to make an informed decision, just as physicians must rely on patients to honestly disclose deeply personal medical information so that a proper diagnosis can be rendered [14]. In practice, higher levels of trust between patients and their physicians are associated with improved treatment adherence, better health outcomes and higher levels of patient satisfaction [15-17]. Should this element of the patient-physician relationship be neglected, diminished levels of trust are then correlated with reduced and poorer continuity of care, less patient compliance and reductions in patients' overall health status [18].

In summary, there is a direct link between the maintenance of patients' trust in their physicians and the fulfillment of the profession's ethical obligations. The curriculum proposed by Cruess and Cruess should therefore be augmented by modules that teach physicians how to establish and maintain trust within the patient-physician relationship. To this end, physicians should be taught to embrace patient-centered communication practices, respect patient autonomy and effectively manage any conflicts of interest that might undermine the patient-physician relationship. Through

these methods, physicians may better serve patients, engender trust within society and perhaps even maintain the privilege of professional self-regulation.

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Clinical Pearl

Ten rules for keeping the art of medicine alive in daily practice

by Edward C. Rosenow III, MD, MS

1. Be on time. If you aren't, apologize. If you know you'll be late, notify the patient. Doing so tells the patient that you respect his or her time.
2. Find a way to touch your patient; the simplest way to do this is to shake hands when you enter the exam room. Look the patient in the eye when you shake hands. Maintaining eye contact throughout the visit conveys sincerity and honesty.
3. Be interested in what your patient is saying—she can tell if you are faking it. Cultivate curiosity about how this patient is different from other patients.
4. Communicate. Lack of communication is the most common complaint patients have about their physicians. This does not just mean talking—it also means listening. Being an active listener and responding to patients and their families is a vital skill. Effective communication includes explaining tests and diagnoses with patients in plain English.
5. Learn to appear relaxed and not in a hurry. In situations of illness or crisis an aura of calmness goes a long way. It shows patients that, at the moment, their care is more important to you than the next patient.
6. *Never* refer to a patient by a diagnosis. Patients are individuals, not loci or hosts for disease. Do not tolerate others' use of such terms; such usage reinforces a service-oriented culture and makes the patient-physician relationship less personal.
7. Convey a sense of warmth. This can't be done without smiling. Endeavoring sincerely to establish rapport with patients helps put them at ease.
8. Be mindful of how often you interrupt. Studies have shown that the physician usually interrupts the patient less than 20 seconds into the patient's side of the dialogue.
9. The needs of the patient must come first. This means you have to put aside your own prejudices and biases to help the patient. This clinical encounter is for the benefit of the patient—not the physician.
10. The "platinum rule" of medicine is: treat every patient the way you would want a member of your family treated. A twist on the "golden rule," it is one of the best ways to be aware of the needs and fears of our patients.

Note

This is adapted by the author from his Recertifying in the art of medicine: what I would tell young physicians. *Mayo Clin Proc.* 2000;75:865-868.

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Policy Forum

Will reduced resident work hours improve the state of the art of healing?

by James O'Neill Jr., MD

At the outset, it might be best to say that the answer to the question of how reduced resident work hours will affect the art of healing is unsettled in the minds of most. The publication of the Institute of Medicine report, "To Err is Human: Building a Safer Health System," in 2000 resulted in a national initiative to improve quality and safety in medicine [1]. More than a decade earlier, in 1988, New York state had restricted resident work hours to 80 hours a week and imposed rules for supervision. These restrictions came about as the result of an unfortunate hospital death and the assumption that a resident's fatigue was partly responsible for the death. Although numerous studies have failed to prove this assumption and the 80-hour limit was chosen arbitrarily, the Accreditation Council for Graduate Medical Education accepted and codified the New York legislation in 2003, mainly because it "made sense" that a better-rested resident would make fewer mistakes and that, therefore, patient outcomes would be better. So why are there still questions about this assumption?

It should be understood that the 80-hour limit does not seriously impact residents in such specialties as radiology, pathology, dermatology, ophthalmology and others who never worked 80 hours a week on average to begin with. And the effect was minimal on pediatrics and internal medicine, where for years on-call coverage has averaged one night in four. The greatest impact has been on the surgical specialties where, because of patient volume and educational requirements, resident numbers have been limited, and night call has been every other or every third night. It should be noted that in 2004 the Blue Ribbon Committee of the American Surgical Association endorsed the 80-hour work week and proposed measures to implement safe, quality patient care while promoting an environment to reduce resident fatigue, improve family lifestyle and allow time for legitimate personal interests [2].

Literature is now accumulating about how work-hour limitations have affected different aspects of patient care and resident education and how new systems and approaches can accommodate the consequences of these changes. But have we achieved all that the work limitations were meant to achieve? It is useful to interpret this question with the understanding that the purpose of resident education is the production of a safe, knowledgeable, ethical physician who will place the interest of the patient before his or her personal interest [3]. The essence of a physician's

professionalism, then, is dedication to patient service, and satisfaction comes from how well that is accomplished. It is obvious that the current trends toward a more controllable lifestyle, such as work-hour limits, conflict with the traditional ideals of the profession, and the methods we devise to implement change must take this into account.

In light of the above, here are a few observations that have been made about the recent changes. The limitations on work hours have generally been shown to result in less resident fatigue, a greater sense of well-being, fewer motor vehicle accidents during off-duty hours and slight improvement in surgery in-training exam scores [4, 5]. A study of perceived stress in surgery residents showed a decrease following the 80-hour limit, but their stress levels were still above normal levels for subjects in the control group, and rates of burnout in a number of specialties have shown little change [6]. Available studies of patient safety measures have been disappointing so far [7]. Some show a decrease in medical errors by first-year resident trainees with work limitations, but global surgery surveys show some worsening of outcomes following the work restrictions [5].

As we have accommodated the 80-hour mandate, it has been necessary to devise new systems of care that include moonlighting physicians, physician assistants and others. Yet, industrial studies have indicated that adding more people to a process increases the incidence of errors. Kellogg et al found a need for a “new template for professionalism,” but this new attitude may not be as satisfying to a physician who entered the profession with different expectations [8]. Night float teams and wide cross-coverage are necessary in this new paradigm, but the risk is that the sick patient will encounter a well-rested physician who is nevertheless poorly informed about that patient. Thus, elaborate computer-based programs have been designed to insure accurate and timely information sharing that will aid in effective communication at the time of “patient hand-offs” [9]. Such measures show promise. Other solutions will be needed, and we must thoroughly evaluate the changes we make. As we introduce change we must ensure that our system of education results in a physician cadre with an attitude that embraces the ideals of the profession—to promote the welfare of the patient *first*—and that the next cadre is knowledgeable, safe, ethical and concerned for the patient; that is the key to improving the art of healing.

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Medicine and Society

Improving clinical decision making by excising the physician's judgment

by Abraham P. Schwab, PhD

In 1950 a patient with diabetes couldn't test his or her own blood sugar or have it tested by the doctor; a pregnant woman couldn't get an ultrasound picture of her fetus and we didn't know what DNA looked like; the polio and measles vaccines didn't exist and neither did Medicare or Medicaid. Today these are such common aspects of routine medical practice that it's hard to imagine not knowing about the double helix or the perpetual problems of Medicare and Medicaid.

This statement, "In 1950, statistical prediction rules (SPRs) weren't used in medical practice," doesn't evoke surprise at all, but it might if Paul Meehl's work had been taken seriously by the medical community when it was first published in 1954 [1].

What is an SPR?

An SPR in medicine takes a small number of variables specific to a diagnosis or given set of clinical circumstances and uses those variables to produce either a probability for a particular outcome or a recommended course of action. Sometimes SPRs are referred to as "clinical prediction rules" in medical literature, but, as I'll explain later, this can be misleading. One SPR produced for medical practice regards the treatment of prostate cancer. The most effective treatment for prostate cancer (either radiation, resection or a combination of the two) is determined by whether or not the cancer has spread beyond the prostate. A physician typically makes an intuitive judgment based on his or her experience and various clinical and test data such as the stage of the cancer, the prostate-specific antigen (PSA) and the Gleason's score. In 1997, Partin et al. produced an SPR to provide physicians and their patients with a calibrated estimate that would not rely on the intuitive judgment of the physician [2]. Using the table the authors created, a physician can input the clinical stage of the cancer, the PSA and the Gleason's score and quickly determine the probability that the cancer has spread beyond the prostate. Even though this doesn't automatically dictate the course of treatment (physicians will view these probabilities differently for a 70-year-old patient than for a 45-year-old patient), it does provide a sound basis for deciding on the best course of treatment. No longer left to the vagaries of a clinician's intuitive judgment (which may be affected by the fact that the last three patients had prostate cancer that had spread), the physician's recommendation and the patient's decision can be based on more reliable and objective information.

How does one know an SPR is reliable?

In short, one knows by testing it. If patient information plugged into the table mentioned above indicated a 70 percent chance that the prostate cancer had spread, that prediction would be verified using new cases. In their study, Partin et al. used 4,133 cases from three different centers to produce their SPR. Evidence of this SPR's reliability was then produced through a "bootstrap estimate." Partin et al. drew random samples from the original 4,133 cases and tested the SPRs prediction against the known clinical outcome in each case. More evidence can be gathered by systematically evaluating how well the SPR predicts the spread of prostate cancer in new cases; that is, cases which weren't used to produce the rule. For example, if the researchers had produced the SPR using data from only 2,500 cases and then tested it on the approximately 1,500 remaining cases, they would have had even more evidence that the rule worked.

Why would physicians want to use an SPR?

Before physicians and other experts make recommendations, they gather information and interpret it. When an oncologist suggests resection of a patient's tumor, that recommendation is based on raw data—perhaps from an MRI, a biopsy or a mammography—and an interpretation of that data. Looking over these reports, the oncologist and surgeon must decide whether to recommend a lumpectomy or mastectomy or other treatment.

Presumably, the advantage of expert judgment in such decisions is that the expert has "been here before." It's a comfort to rely on the expert's experience—she's interpreted this kind of x-ray before, probably remembers how it turned out in the past and thus seems to be in the best position to make the most accurate interpretation.

That experts make better judgments than novices is not generally challenged, and I will not challenge it here. But studies have shown that decision models based on an expert's past decisions outperform the expert himself when applied to new decisions [3]. Presumably this is because even the best expert, like the jump shooter in basketball who sometimes lets her elbow drift away from her body, is inconsistent from time to time. Most importantly, many other studies have shown that SPRs generally match or outperform the decisions of the best experts [4]. The great boon of SPRs and the optimism about their potential benefit for medical practice is that every patient can have his or her treatment guided by decisions that match or improve on the intuitive judgments of the top experts.

SPRs and computer-assisted decisions

Computer assistance is available for some of the complicated calculations that are often part of clinical decision making. For example, a physician who wants to know the odds that a patient's positive test results indicate actual disease can refer to free online diagnostic test calculators [5]. An example used by Gigerenzer and Hoffrage can offer helpful explanation here. Let's say that 1 percent of 40-year-old women have breast cancer and that mammography has 80 percent sensitivity (gives a

positive result to 80 percent of the women with breast cancer) and 90.4 percent specificity (gives a false positive to 9.6 percent of the women who don't have breast cancer). Now, if a 40-year-old woman gets a positive test result, what's the chance she has breast cancer? [6]

A physician who knows the Bayesian algorithm for posterior probability can do the math: 1 percent multiplied by 80 percent divided by (1 percent multiplied by 80 percent plus 99 percent multiplied by 9.6 percent). Alternatively that physician could rely on a program like the diagnostic calculator mentioned above to compute the answer. Making use of such a program is referred to as computer-assisted decision making [7].

Computer-assisted decision making is not the same thing as following an SPR. The difference is that a computer-assisted decision is one for which a computer has executed a complicated calculation; an SPR, on the other hand, is a heuristic or easily remembered rule that the physician, once she has a few other pieces of information, can quickly translate into a prediction or recommendation. It's true that the SPR for prostate cancer gives a percentage chance that the disease has spread and the program described above gives a percentage chance of disease presence following a positive mammogram; the distinction between the two lies in the root of the prediction. The computer-assisted decision takes a test result and calculates or determines its meaning. The SPR takes several pieces of information (clinical stage, PSA and Gleason's score) and predicts the possibility of specific clinical results.

The line between computer-assisted decisions and SPRs won't always be bright, just as it isn't in the above examples. Indeed, in some cases, a physician might use computer assistance to get one piece of information (e.g., the Gleason's score) and then plug that information into an SPR. A clearer example of an SPR without computer assistance is the Ottawa Ankle Rule. This is a simple rule that can tell a podiatrist or other physician whether or not to get an ankle or foot x-ray following a blunt trauma to the ankle. When using this SPR, five pieces of information about a patient's foot and ankle tell a physician whether or not a foot or ankle x-ray is needed [8].

As I mentioned earlier, SPRs have also been described as clinical prediction rules in the medical literature. This can be misleading because some clinical prediction rules are straightforward SPRs (e.g., the Ottawa Ankle Rule), while others are computer-assisted decisions. It would be a mistake, then, to assume that all clinical prediction rules are SPRs.

The future of SPRs

Despite the conclusions of the studies, few SPRs have been used in medical practice from Meehl's day until the present. I have noted above one for prostate cancer. A number of others can be found on the Mount Sinai School of Medicine Web site [8]. Given the fifty years since Meehl's work, you might think more would be in use, and I think more should be.

Without an effort to produce and use SPRs in clinical care, physicians restrict the future of the art of healing by subjecting powerful evidence-based therapies and diagnostics to the inconsistent intuitive judgments of its practitioners. Dawes has noted that “the ineffable, intuitive clinical judgment is very difficult to challenge—at least, not without an extensive statistical study to assess its bias” [9]. We can only hope that with robust research conclusions illustrating the predictive reliability of SPRs we will overcome our blind faith in intuitions.

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Op-Ed

Should medical school applicants be tested for emotional intelligence?

by Carol Elam, EdD, and Terry D. Stratton, PhD

Each year medical school admissions officers try to identify the best, brightest and most suitable candidates from among the 37,000 who are competing for approximately 17,000 available slots. In so doing, these officers and their designees must determine whether applicants fit not only with the missions and priorities of their respective programs and institutions but also with the values and goals of the profession of medicine.

Admissions committees typically consider a standard set of criteria, including undergraduate institution and field of study, undergraduate grade point average, Medical College Admission Test (MCAT) scores, letters of evaluation from faculty and premedical advisors, and interview scores. The overwhelming majority of accepted students go on to graduate from medical school, suggesting that current admissions processes—largely unchanged over the last half-century—are generally effective in identifying successful *matriculants*. However, inasmuch as graduation rates are a questionable proxy for quality, a more apt measurement outcome might be how well admissions committees are able to identify students who will make good *doctors*.

Physician empathy and communication skills

The progressively proactive roles of patients and a movement toward interprofessional care have highlighted the need for physicians who possess superior interpersonal communication skills. Public dissatisfaction in this area is high; patients complain that they are not listened to and that physicians fail to demonstrate appropriate levels of caring, empathy or even tact. The potential impact of such deficiencies can be more than simply disgruntled patients. Levinson and colleagues have gone so far as to establish an empirical link between communication behaviors and subsequent malpractice litigation among primary care physicians [1].

Recognizing that the practice of modern medicine calls for a broad range of skills, aptitudes and talents makes the task of assessing applicants' qualifications more challenging. Traditional cognitive criteria reflecting intellectual ability, supplemented with emphases on interpersonal skills, have further expanded to include an evaluation of altruism, cultural sensitivity and professionalism. Perhaps the most limiting factor in these efforts is a lack of reliable and valid measurement,

that is, a means for accurately assessing such seemingly subjective constructs in individuals seeking admission to medical school.

The allure of emotional intelligence

One promising means for assessing desirable cognitive and noncognitive abilities or aptitudes is measuring emotional intelligence (EI). Psychologists John Mayer and Peter Salovey, who first coined the term, defined EI as “verbal and nonverbal appraisal and expression of emotion, the regulation of emotion in the self and others, and utilization of emotional content in problem-solving” [2]. The contention that traditional intelligence (as measured by IQ) was often trumped in real life by possession of high levels of proficiency in emotional intelligence struck an intuitive chord with many, especially those in the business and corporate world.

It makes sense that EI-related abilities might be important in physicians’ interactions with patients and in building the rapport and trust necessary to establish a solid patient-doctor relationship. EI could moderate or mediate physicians’ abilities to understand patients’ responses to various treatment regimens, thus improving adherence. Similarly, emotionally skilled physicians might interact with and relate to ancillary members of the health care team more effectively. On a personal level, EI might help physicians better react to situations by enhancing their own emotional self-awareness, potentially reducing professional burnout.

Measuring emotional intelligence

The measurement and potential relevance of EI is gradually becoming a legitimate topic of scientific investigation. Evidence of incremental validity, that is, whether EI is capable of explaining variance unaccounted for by existing personality inventories, is fairly compelling [3, 4], although results do vary by specific EI measure [5]. In particular, competing measures of EI have developed along two parallel tracks. “Ability models” view EI as a form of intelligence involving emotional perception, expression, understanding and regulation. In contrast, “mixed trait-ability models” supplement individual abilities with social-psychological traits related to emotion, such as empathy, sociability and temperament [6].

On first glance, it seems prudent to ensure that all physicians possess a modicum of emotional intelligence. Exactly where in the medical education process assessment of EI should be undertaken, however, depends largely on how mutable emotional intelligence is. Unfortunately, questions regarding the stability of EI remain empirically unresolved [7], but proponents of neither model suggest that EI is necessarily immutable to training or intervention. If EI can be instilled, nurtured or even taught during medical training—either via mindfulness exercises, mentoring or modeling—then screening for these aptitudes among medical school applicants may not be as important. If, on the other hand, EI is akin to cognitive intelligence (e.g., trait-like, developmental, etc.), assessment during the admissions process may make sense.

Even if the use of EI to select applicants at admission is not yet empirically justified, Carruthers, Gregory and Gallagher have demonstrated that, logistically, EI can be assessed during the admissions process by having interviewers rate the extent to which applicants possess specific abilities [8]. Other programs, in an effort to improve selection using 21st century tools, are developing objective standardized clinical exam (OSCE)-type exercises in which applicants are required to demonstrate certain skills [9]. Perhaps the use of performance-based EI measures like the Mayer-Salovey-Caruso Emotional Intelligence Test could be correlated with applicants' actual behaviors as demonstrated in an admissions-based OSCE.

A new tool for selection?

In our view, measurement concerns that once plagued EI-related research have become far less daunting, and empirical evidence now shows encouraging signs of incremental and construct validity. A far greater limitation to using EI as a screening criterion for medical school admission is a relative lack of companion research establishing EI as a predictor of desirable clinical outcomes. Our research found a modest but significant positive relationship between students' EI and communication skills as measured across a series of OSCE scenarios [10]. These same data also revealed EI to be significantly *negatively* correlated with students' performances on physical exam-related components. As a result, until these findings are replicated and expanded upon to further establish links between EI and measured performance, any discussion that advocates for either the unequivocal use or absolute abandonment of EI as a clinically useful criterion is premature. In our opinion, at this early stage, to deny the potential for any future relevance or application in medical education seems the greater of these two failings.

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Related article

[Does high EI \(emotional intelligence\) make better doctors?](#) July 2006

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Op-Ed

Does high EI (emotional intelligence) make better doctors?

by Peggy J. Wagner, PhD

Emotional intelligence (EI) is a theoretical construct that has mass appeal. First developed in the business world, EI is now viewed as an essential element for effective functioning in the market place [1]. The application of the five basic EI abilities—self-awareness, self-regulation, self-motivation, social awareness and social skills—to the practice of the art of medicine is intuitively sound and clearly applicable to the patient-physician relationship [2]. EI could be a key element in maximizing effective patient care and thus increasing patient satisfaction and clinical outcomes.

So are we ready to include EI in our selection criteria for future physicians? Six issues suggest that such inclusion may be premature. First, the current state of assessment of EI is not adequately developed, largely due to the continuing debate about the nature of its theoretical underpinnings. For example, is EI a form of intelligence that includes certain competencies? [3] Is it a cluster of skills and ability traits? [4] Or is it a group of learned capabilities that lead to outstanding performance in the workplace? [5] Each definition leads to different measurement techniques. In daily discourse, we often refer to EI, interpersonal skills and communication competencies similarly and yet they remain distinctly different in their application to the practice of medicine. Another problem with the measurement of EI is that most techniques rely heavily on self-reported data. Given that medical students are quite skilled in “presenting well” (in itself an EI skill), can we truly rely on self-reporting to identify those who are deficient in this area? As one can see, the definition and measurement of EI collapse into one another.

Second, since most measurement and theoretical approaches consider that EI itself reflects multiple dimensions, should we only consider the components or factors of EI that are most useful to the practice of medicine, for example, empathy, the ability to identify with the feelings of others? Could we as a field even reach consensus on what elements are most important in a medicine-specific EI concept? The work of Kasman and colleagues suggests that we should focus on the common emotional experiences and needs that physicians have [6]. Once we do this, perhaps we will be better equipped to identify the core emotional skills that are necessary to practice medicine.

Third, we need to understand the relationship between “technical” excellence and EI. We must consider whether by seeking out those with EI we would risk excluding persons with technical brilliance in the areas of clinical reasoning or knowledge acquisition and interpretation who have great potential to advance the field of medicine. Surely it is conceivable that the multiple aspects of intelligence are all essential to the growth of the field of medicine.

Next, EI is considered to be a more malleable construct or competency than IQ, which is thought to be relatively stable and fixed. If this is true, it might be more useful to provide effective training to raise learners’ EI to an appropriate level rather than to use EI measurement as a criterion for admission. More fundamentally we have to decide what *is* an appropriate level of EI. Is more better? One might ask whether too high an EI or “over-sensitivity” in some areas might actually function as a distraction from the effective practice of medicine.

Lewis et al present the intriguing notion that EI might be one competency among many that is essential in a team or working group [7]. These authors suggest that the most effective way to practice medicine is as part of a team with different members bringing different skills. Perhaps it is not the physician who needs the highest EI but another member of the team. Perhaps we should be constructing work groups that provide optimal levels of all elements of intelligence. Maybe it is rare to be both highly technically intelligent and highly emotionally intelligent. Are there enough of those folks to fill the applicant pool and meet the rising demand for physicians?

Finally, and perhaps most critically, there is little evidence that physicians with high EI scores have the best patient outcomes as measured in patient satisfaction and clinical outcomes. In some initial work, only the dimension of happiness from the Bar-On Emotional Quotient Inventory correlated with patient satisfaction [8]. The other factors did not. We will have to demonstrate that EI is relevant to these outcomes before we suggest that it become a critical screening admission criteria.

In sum, EI in its current state may be useful—at best—as an adjunct to the interview which remains subjective and yet is used for admission selection. The danger with quantifying EI and giving scores is that, as scientists, we are overly attracted to quantification and numbers. Perhaps we are better served to use our own EI to “sense” or “intuit” the appropriateness of the applicant.

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Virtual Mentor

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