Virtual Mentor

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 beside 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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James N. Kirkpatrick, MD, is a cardiology fellow at the University of Chicago, where he has also completed fellowships in echocardiography and clinical medical ethics.

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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Hunter Groninger, MD, is a faculty member of the Center for Humanism in Medicine at the University of Virginia in Charlottesville.

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