February 2012

Dean’s Letter: “Is there a Doctor on the Train?”

I’m on the Amtrak Northeast regional train headed from NYC to D.C. on a Friday afternoon last December. The amplified metallic voice of the conductor is booming, but instead of the usual “next station stop New Carrollton, Maryland,” I hear in a plaintive tone “Is there a doctor on the train?” followed by a request for any physician aboard to proceed immediately to the rear car on the train.

A moment of indecision; I am the Dean of a prominent NYC medical school, and yes, I have an M.D. degree, but do I have the skills needed to attend to who knows what kind of emergency at the back of the train? And more selfishly, do I want to get embroiled in a situation that may delay my departure from the train at Union Station, two stops hence? Shrugging off both concerns, I move rapidly and decisively through each car on the long train, or at least as decisively as the swaying motion of rails on tracks will allow. Only one “companion” accompanies me on this trek, a physician who turns out to be a French tourist with limited command of English and no familiarity with the names of drugs in the U.S., which in this case proves to be a critical skill.

When I reach the rear car, I find two Amtrak conductors and a young fellow passenger hovering over an overweight, middle-aged African-American woman seemingly asleep in her seat. One of the conductors found her completely unresponsive rather than just asleep when he asked for her destination, and sounded the request for a doctor. The young passenger who also responded to that call was not a physician, but he was an emergency medical technician (EMT). I conferred with my EMT colleague and learned that no one knew how long the woman had been unresponsive. Her breathing was somewhat shallow but regular and unlabored. Her pulse was steady with a slow rate. What was the diagnosis and what treatment could we administer?

Before I try to answer those questions, allow me to jump ahead. As the train pulled into Union Station, my patient encounter led me to reflect on my own medical training and career choices, and on two closely linked questions: what does every physician need to know, and how does an aspiring physician choose among the varied career paths in medicine? Overall, I recall my four years of medical school as an exhilarating, but demanding experience. In the “preclinical” first two years, we...
were inundated by an enormous volume of facts, while the last two, “clinical” years featured high stress “attending rounds” where an inadequately prepared student could literally be reduced to tears by the sharp questioning of one of the many luminaries on the hospital staff. I never questioned the future relevance of memorizing minute details of anatomy or of the content of other courses that someone with no intention of becoming, for example, a neurosurgeon might have considered tangential at best.

Indeed, the mnemonic for enumerating the twelve cranial nerves is still stuck firmly in my hippocampus (or wherever else such memories reside) more than 40 years later. One wag, a fellow dean, said that half of what he was taught in medical school was wrong and the other half he had forgotten; he just hoped it was the same half. Perhaps an exaggeration, but overall not far from the truth.

With biomedical knowledge increasing at an ever more rapid rate, medical educators recognize that having students try to accumulate endless numbers of facts is a futile task. Rather than merely acquiring knowledge, what is needed is development of “critical thinking skills” and becoming a “life-long learner.” These are competencies that every physician, irrespective of career path, will need. In fact, Einstein Senior Associate Dean for Education, Marti Grayson, recently asked a faculty task force chaired by Julia Arnsten, Chief of the Division of General Internal Medicine, to define the competencies that anyone receiving an Einstein M.D. should have developed.

The task force’s draft list of competencies is still being reviewed by a broader set of faculty, but it’s likely that critical thinking skills, life-long learning, qualities such as professionalism and humanism, and communication skills with both patients and colleagues (including other health professionals such as the emergency medical tech I joined in the episode described earlier) will make the final list. Even after defining these core competencies, there is still the challenge of shaping curricular content to ensure that our students develop such competencies. You can read more about that and other new developments in education in the upcoming issue of Einstein magazine.

Closely tied to the question of medical curricular content is that of career choice and specialization. Career choices are always shaped by a combination of internal and external factors. Critical factors for my own career development were an early interest in science, medicine, and research, excellent mentors, and graduating with virtually no debt thanks to scholarships in college and medical school. Another key factor was the “doctor draft” (abolished in 1972), which made fulfilling that two-year obligation as a member of the Public Health Service at the National Institutes of Health (NIH) a particularly attractive option for a physician interested in research and academic medicine. In addition to conducting laboratory research, I saw patients at the NIH Clinical Center, but in a highly

Events with alumni and faculty offer opportunities for mentoring and career advisement.
specialized “practice” involving genetic endocrine diseases. Later, a fortuitous set of circumstances culminated in my being appointed director of my Institute’s intramural research program, the start of the research administrator phase of my career.

The current generation of medical students faces a quite different array of external factors affecting their career options. Loan indebtedness has reached unacceptable levels nationally, and is one factor that may dissuade graduates from selecting a career in primary care, which may pay as much as $3.5M less than specialty practice over a lifetime.¹ The ratio of primary care physicians to specialists is lower in the U.S. than other developed countries, and some experts view this as a major factor in higher healthcare costs without clear benefits that characterize the U.S. system.² Incentivizing graduates to choose a career in primary care may be vital to successful healthcare reform.¹² Einstein graduates’ debt is below the national average for private medical schools, but increasing availability of scholarships is a high priority. Supporting scholarship funds is one area in which our alumni have been and will continue to be very helpful. Another is in career advising. Senior Associate Deans for Student Affairs, Nadine Katz and Stephen Baum, have been working hard to improve Einstein’s career advising program. One new component taps into our national network of alumni who can provide critical information and guidance regarding residency selection and career choice. An enhanced curriculum and robust career advising program are just two of the ways Einstein is addressing those two key questions: what does every physician need to know, and what career path should medical students choose?

Back to the rear of the Amtrak train and our unresponsive patient. I lift her eyelids and the EMT and I note miosis, “pinpoint” pupils. The differential diagnosis is long, but overdose of an opiate (morphine-like) drug is high on the list. Sure enough, we find a bottle of prescription narcotic-containing tablets in her purse. We don’t have access to opiate antagonists that could reverse the effects of her presumed overdose. Fortunately, she hasn’t taken a sufficient amount to suppress her breathing completely, but to be safe, we ask the conductors to alert emergency medical personnel to meet us at the next station, where appropriate observation and treatment will be available. I never did learn why she had been prescribed a narcotic drug, nor the circumstances that led to her overdose. But this patient encounter, beyond highlighting my own shortcomings as an emergency responder, focused my attention on the conundrum faced by physicians in treating pain.

Inadequate treatment of pain in patients with cancer and other diseases is a major problem.³ An estimated 115 million adult Americans experience severe chronic pain at a cost of $560 billion annually in direct medical expenses. Yet indiscriminate overtreatment and addiction are major


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problems too. Addressing tough issues such as pain management, requires both a tactical and strategic approach. We need appropriately trained physicians who can deal with current problems using the best available tools. There is a role for physicians who specialize in pain management, but pain is such a fundamental problem, cutting across almost all diseases, that mastering the basic elements of pain management should be an essential part of the education of every physician. We also need robust investment in the full spectrum of biomedical research, from basic biology to behavioral and social science, so that in the future, we will have more effective methods for prevention and treatment of pain.

As I stepped off the train and walked toward Union Station, rather than being discouraged by the enormity of the challenges we face as physicians, I found cause for hope. Einstein’s faculty, through their education of our medical and graduate students and through their research, are tackling the tough issues, and thereby helping us move closer to our ultimate goal of improving human health.

Allen M. Spiegel, M.D.
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Albert Einstein College of Medicine

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