

# Virtual Mentor

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## MEDICAL NARRATIVE

### Learning Bedside Medicine

John Kugler, MD, and Abraham Verghese, MD

### The New Faculty Member Perspective

by John Kugler, MD

I hoped it would never come up, that my dirty little secret could remain hidden. My intern year was getting under way and I had little doubt about my cognitive knowledge—I had been successful on test after test throughout my academic career. My only misgiving was in the physical exam. Surprisingly to me, my insecurity with the bedside exam would remain with me through residency, even through chief residency, though it would be tempered by the knowledge that most of my fellow residents were no more skilled than I. Now as I work with medical students as an attending physician, I wonder how my “secret” can shed light on what we are doing wrong and what we might do to have physicians begin their internship with confidence in their bedside skills.

“Don’t worry. You will just get the echo,” is a phrase I remember keenly, since I found it both reassuring and disturbing. We were first-year medical students struggling to understand murmurs and heart sounds in the introductory physical diagnosis course. We practiced basic exam skills primarily on each other and had standardized patients for the urogenital exams. Later in the year, specialists brought in patients with interesting physical findings and we took turns examining them. The day I heard, “Don’t worry. You will just get the echo,” was a day when we fought to hear a heart murmur. It was reassuring to think that there was some gold standard beyond my auditory and mental capacity, should I fail to diagnose what was wrong; but it was crushing to let go of that dream so many of us had of bending over a patient with the stethoscope in hand and confidently making a diagnosis.

Trying to learn the reflexes was particularly memorable. Many of us had been quick learners in other disciplines, and it was difficult for us to understand why clubbing the knee over and over again did not produce the desired jerk. The neurologist could make us dance with his long, bending reflex hammer, wielding it more like a magic wand than a medical instrument. Was it because our hammers were shaped more like tomahawks than wands that they produced the desired magic so infrequently? Were we not doing the same motion? Was it really that difficult? While frustrating, the reflexes kept our attention since producing a reflex gives the examiner instant feedback on a job well done. Other exams seemed to become interesting only when disease was present, but as subjects, we were all healthy. We all had the same *lub dub*, vesicular breath sounds, healthy knees and shoulders. The exams seemed

forgettable because there was nothing abnormal to find. Were they also more forgettable because we knew we could just get the echo? Had technology made it unimportant for us to master these skills?

The course was always more interesting when we watched seasoned clinicians at work. I recall being mesmerized as an experienced oncologist showed us how to examine a patient's neck for lymph nodes. I was fixated on his hands; they were so expressive, and, as he touched the patient, they seemed to convey confidence, reassurance, compassion, and experience—all without effort. In contrast, my hands seemed to give away my doubt, my inexperience, my worry and were a testament to my awkwardness. I think it was the residual sense of inadequacy from that encounter that subtly and subconsciously led me to spend as little time touching the patient as I could manage. During the interview I was supremely confident; on matters of science and medicine, I was in my comfort zone; my years as a bartender made it effortless to relate to strangers. *Touching* strangers in the privileged manner that is given to us was a very different story. I always had the notion that patients could see right through me; that they could feel my inexperience and lack of confidence, feel it come off my hands, and that they were one step away from demanding a new doctor.

The seed of insecurity that was planted from watching that oncologist's hands grew to bear a memorable fruit during my internal medicine student clerkship. I had been rotating with a private physician in rural Virginia, and one of his patients was hospitalized with abdominal pain. He had been diagnosed with cholecystitis, but a cholecystectomy did not completely relieve his pain. I had examined him twice, feeling around his abdomen, looking for the cause of his pain and finding none. Later, a CT scan would show the man's spleen extended into his pelvis and across the midline, massively enlarged from lymphoma. When I returned to the bedside with my preceptor, he deftly showed me the outlines of the massive spleen that I had so astutely overlooked. Recalling this particular anecdote would always remind me how the physical exam still matters, so long as it is not done by someone who is inept.

As residency got underway in earnest, it was clear that I was not alone; we were all similarly unprepared to do excellent physical exams, and our focus was on getting enough sleep and doing as little harm as possible. Rounds were usually conducted outside the patient's room or sitting in our work room. If we rounded at the bedside there was no time for the attendings to critique our exam or demonstrate an extensive exam of their own. Our medical school training was supposed to be sufficient—it was amazing how much was taken for granted when we said things like “jugular venous pressure is normal” or “cranial nerves are normal.”

There is certainly no easy way to turn students and residents into masters of the exam. My medical school mentor lamented that as residents we would not receive the adequate repetition to hone our skills, given the work-hour restrictions. But lack of repetition is not the problem. Poor technique practiced thousands of times is still poor technique, only now solidly engrained. If we let students know early on that a

sound clinical exam is still an essential part of being a competent physician, we can avoid the trap that many students fall into as they focus their efforts on things that show up on written exams. Students and residents alike need to be observed doing exams, so they can improve their skills and lose bad habits they may have picked up along the way. During my year as chief resident, professor rounds were started as a way to bring students and residents back to the bedside with seasoned clinicians. It was not uncommon to have junior faculty attend the rounds to try to get a better idea of how to teach the physical exam to students. From faculty to students, there was a clear desire to develop strong bedside skills, and making patient rounds with most senior physicians to work on exam skills and interpret their findings was a step in the right direction.

In the next step we need to go beyond the USMLE Clinical Skills Exam and evaluate students' technical skills more vigorously. If students know when they enter their clerkships that they will need to demonstrate proficiency in exam technique by the end of the clerkship, they will undoubtedly focus energy on mastering the physical exam. Having students finish clerkships with a sense of being proficient in the physical exam will give them a head start on being excellent residents and physicians in the years to come.

### **The Senior Faculty Member Perspective**

by Abraham Verghese, MD

John Kugler's candid and heartfelt narrative confirms what I think has happened with bedside skills: we simply are not teaching these skills where they matter most, and that is on the wards during the clerkship and subinternship years, or even in residency training. We get away with it because we use technology so abundantly.

I think a major reason for the decline in skills is that formal testing of these skills does not take place at the end of medical school. The National Board of Medical Examiners, in its USMLE Clinical Skills Exam, does not emphasize clinical skills in the sense of testing *technique*—can the student elicit a normal knee reflex?

Similarly, even after 3 years of internal medicine training, the physical diagnosis skills are not really tested before board certification. As Dr. Kugler describes, we make assumptions that when someone says the exam was “normal,” it was, when in fact I think trainees are nowhere as certain about physical findings as they are about the dose of Lasix or the approach to hyponatremia.

I have no doubt that if we attempted to put in place a standardized test using standardized and real patients, with examiners watching for *technique* as well as understanding of the methods of bedside examination, our students and residents would (much as they do in Canada and Britain) spend a lot more time mastering these skills in anticipation of the test. We would be teaching to the test.

The public would be horrified to find that a pilot gets a license without having flown a plane with an instructor sitting next to the pilot and watching every move. But in a sense that is what we do when it comes to the physical exam—there is no testing by an examiner.

I have great confidence in the clinical knowledge and patient management skills of our students and residents, but the area of bedside skills is in need of improvement, particularly if we are to practice cost-effective medicine and minimize a patient's exposure to radiation. Recent studies have shown that a patient's exposure to ionizing radiation as a result of imaging studies can be quite significant, and the long-term ramifications of such exposure have not been studied [1]. Imaging tests are valuable and often necessary, but if simple bedside skills make them unnecessary, then the lack of such skills is not just costly, but dangerous. We have to be sure people can fly before we let them go solo.

### References

1. Fazel R, Krumholz HM, Wang Y, et al. Exposure to low-dose ionizing radiation from medical imaging procedures. *N Engl J Med*. 2009;361(9):849-857.

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