

The Cost of Technology



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NO ONE WAS MORE SURPRISED THAN THE PHYSICIAN HIMSELF. The drawing was unmistakable. It showed the artist—a 7-year-old girl—on the examining table. Her older sister was seated nearby in a chair, as was her mother, cradling her baby sister. The doctor sat staring at the computer, his back to the patient—and everyone else. All were smiling. The picture was carefully drawn with beautiful colors and details, and you couldn't miss the message. When he saw the drawing, the physician wrote a caption for it: "The economic stimulus bill has directed \$20 billion to health care information technology, largely funding electronic medical record incentives. I wonder how much this technology will really cost?"

Why was the physician so surprised? Let me tell you about this guy. He joined our pediatrics residency with the rest of the new interns after a two-year stint as the medical officer

aboard an aircraft carrier in the Persian Gulf, a position he had assumed after a single year of general internship in the navy. During the assignment, he had seen this floating city of more than 2500 through every conceivable medical problem from homesickness to gonorrhea, traumatic amputation, and myocardial infarction. He learned to make decisions as significant as diverting an entire aircraft carrier in order to get a patient to a tertiary-care hospital in Bahrain. When you spend a moment with this young physician, you sense innate kindness, humility, and connection to a larger purpose, be this family, country, patients, or hospital. He also has charisma. Students, colleagues, faculty, parents, and kids of every age connect with him. The enjoyment seems mutual. You find him crouching down to meet his young patients at eye level. Evidence of

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his love for children has grown outside the hospital as well. He and his wife have had three kids during his residency. He was an obvious choice for chief resident and is now in that position. This is a physician's physician, a doctor who delivers humanity and competence throughout the day, although if you asked him about these attributes, I'll bet he'd say they are some of his aspirations, not accomplishments.

So it came as a stunning piece of feedback—not surprisingly out of the crayon of a babe—that his patients might be seeing him in a new way since the rollout of the electronic medical record. From my perspective of 20 years practicing and teaching primary care pediatrics and internal medicine and more than two years into juggling the needs of patients with those of the computer, this child's drawing powerfully expressed the deep frustration and concern of many physicians, including me.

When a physician focuses on a patient with complete attention, this simple act of caring creates a connection between two human beings. Almost immediately, the patient begins to feel, well, cared for, and this becomes a first step toward helping that person feel better. This connection between people is also one of the great satisfactions of our profession. It makes us feel needed, and generous, and reinforces our sense of ourselves as healers, thereby restoring us and preparing us to give again. It also happens to be what patients want from their physicians. This human connection has always been a central tenet of the patient-doctor relationship and that mysterious process called healing.

But now the computer has entered this timeless dynamic as a third player. It has become the conduit for all aspects of care from scheduling the appointment to documenting the history, ordering the workup, and communicating with colleagues. We must pick and click according to the EMR's pathways, rather than by following the patterns of learning and thinking we have internalized over years of training and practice. All this searching and selecting takes time, a lot of time. Not surprisingly, we find ourselves entering more and more data while we are trying to listen to and talk with our patients.

How does this differ from jotting notes or writing in a chart? When you scribble notes, they become reminders about history or plans. When you enter information into a computer, if you misspell a word, or click an unintended box, you make a mistake. You select the wrong medication or dose, you order the wrong lab, or you give a patient the wrong diagnosis, to name just a few of the gaffes I've personally made in the past 24 hours. Never mind the gryphon on the shoulder of a timed-to-the-minute, marvelously legible record of one's every action throughout a day that, frankly speaking, is a lawyer's dream come true. You survive in this new system by giving the computer complete attention, the kind of attention we used to reserve for a patient. By default, the patient moves down to second place. As sad and horrifying as this sounds and feels, it is becoming the new reality.

There is a certain irony to all this. For years, we've been hearing that focusing on our patients as people, improving communication, admitting mistakes, and creating patient- and

family-centered care will make us better physicians, gratify patients, and prevent lawsuits. In fact, professionalism and communication are core components of the residency training curriculum. Medical schools have begun to insist that applicants demonstrate proficiency in the humanities and social sciences, as well as the traditional hard sciences. So, to watch these directives shift with the mandate of the EMR seems a sad reversal of progress and common sense.

All this is not lost on our patients. In addition to the young artist, whose drawing speaks volumes, wherever I go in or out of the medical world these days, I hear patients' observations: "My doctor hasn't made eye contact with me since he got on that computer—he's not a very good typist." "Our visits are rushed. My doctor used to have time to listen to my concerns, but now she spends a lot of time complaining about how hard her workday is." Physician colleagues pour out similar comments: "In the past I would see a patient, write a note, close the chart, and spend a moment reflecting on the visit. Now my time goes to fighting with the computer and chasing down my colleagues to get them to lock their notes, so we can submit bills." "I feel pulled in so many directions, like my brain is scattered. I went into medicine to work with people, but now I'm in front of a computer screen all day, managing systems. I still love my patients, but I hate how I'm spending my time."

As medicine evolves, we need to embrace technology to help us consolidate and organize data and communicate with colleagues for the benefit of patients and ourselves. But if we lose the human connection in the process, we will have done untold damage to our profession. It is what our patients want, and it is the sacred trust that drew so many of us to this work. Physicians and patients must speak loudly and clearly, with a unified voice, to address the dehumanizing trends in our profession and insist that the move toward technological reform not leave us with a nation devoid of physician healers. Physicians need to help create electronic systems that allow us to record our thinking—be that algorithmic, expansive, or focused on a patient's unique story and experience. The EMR should improve efficiency so that we have more and not less time to communicate with our patients.

How lucky we are to care for patients like our young artist and to work with colleagues like her physician. They challenge us every day to rethink our skills and to hold on to our finest values. They remind us that in this human profession, we and our charges are just that—human. If we take time to connect with one another and draw strength from listening, learning, teaching, and caring we can join together to find ways to take on new challenges, including the electronic medical record.

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