

Five Rules by Atul Gawande for our sleeping doctors

Harvard Medical School Commencement address, June 9, 2005

Ladies and gentlemen, Dean Martin, Dean Donoff, faculty, alumni, and most of all, graduates of the Harvard Medical School and Harvard School of Dental Medicine Class of 2005, thank you for the unbelievable honor of getting to speak to you on this day. I was stunned to receive the call requesting my presence here. Then they explained that, actually, Bono was your first choice, but he was unavailable. After that, they tried to get either a Nobel Laureate or one of the plastic surgeons on Extreme Makeover, but everyone was pretty busy. So really I was all they had left.

Still, it is a privilege and a surprise to be before you today. Only ten years ago I was sitting just where you are—in fact, right there, six rows in, a bit to the side—a graduate-to-be largely unaware of what I was getting myself into.

Looking back, I think it was the numbers that I was most unprepared for. We are a nation of 296,320,780 people (as of this morning). For this population—never mind the six billion people around the world—you today become but one of 819,000 U.S. physicians and surgeons trying to help them lead long, healthy lives. Also taking part in that effort will be some 2.4 million nurses, 388,000 medical assistants, 232,000 pharmacists, 294,000 lab technicians, 121,000 paramedics, 94,000 respiratory therapists, 85,000 nutritionists.... The numbers are incomprehensible.

Now, a doctor is no bit player. You will leave here given the power to prescribe any of more than 6,600 potentially dangerous drugs. You will be permitted to put needles, wires, and tubes into human beings and soon even to manipulate their DNA. Hundreds will depend on you personally for their lives and happiness. This is a special function we get to serve in society.

Yet, in the midst of this work, you will fast realize that you are still just part of a machine—an extraordinarily successful machine, but a machine nonetheless. How could it be otherwise? The average American can expect to live at least 78 years—two years longer than even when I graduated. But doing so depends more on this system of hundreds of thousands of people than on any one individual in it.

So as you become a white-coated cog in this machine, this remarkable and at the same time maddening factory of health care, how do you not disappear? How do you matter?

I'd like to offer five rules that might guide you in finding a good answer to these questions.

I must point out, however, that my rules for medical practice should be distinguished from the laws of medical practice. Rules are personal instructions you might follow in your life as a doctor. Laws are the immutable realities you come up against in that life. For example, one law is: The labs are always normal, the lumps are never cancer, and the sixteen year-olds are never pregnant, unless you don't check them. Or: If your new patient is on five or more drugs, you will not have heard of at least one of them.

Many other laws exist. There are, for example, thirty-five laws governing the behavior of pagers alone. But these are not what we want to talk about today. What we want to talk about is how one survives among the hundreds of thousands who make their life in this strange and teeming world—and, moreover, having survived, how one might make a worthy difference.

My Rule #1 for you comes from a favorite essay by the writer Paul Auster: Ask an unscripted question. Ours is a job of talking to strangers. Why not learn something about them?

On the surface, this seems easy enough. Then your new patient arrives. You still have three others to see, two pages to return, and the hour is getting late. In the instant, all you will want is to get things over with. Where's the pain, the lump, whatever it is? How long has it been there? Does anything make it better or worse? What are your past medical problems? You all know the drill by now.

But I want you, at an appropriate point, to take a small moment with your patient. Make yourself ask an unscripted question: "Where did you grow up?" Or "What made you move to Boston?" Or "Did you watch last night's Red Sox game?" I'm not looking for a deep or important question, just one that lets you make a human connection.

Some people will not be interested in making that connection. They just want you to look at the lump. That's okay. Look at the lump in that case. Do your job.

You will find that many respond, however—because they're polite, or friendly, or perhaps in need of that human contact. When this happens, see if you can keep the conversation going for more than two sentences. Listen. Make note of what you

learn. This is not a 46 year old male with a right inguinal hernia. This is a 46 year old former mortician, who hated the funeral business, with a right inguinal hernia.

You can do this for more than just patients, too. Ask a random question of the ICU nurse you see on rounds, the medical assistant who checks their vitals. It's not that doing this necessarily helps anyone. But you will start to remember the people you see, instead of having them all blur together. Sometimes you will discover the unexpected.

I learned, for instance, that an elderly Pakistani phlebotomist I saw every day in residency had been a general surgeon in Karachi for twenty years, but emigrated for the sake of his children's education. I learned that a quiet, carefully buttoned-down nurse I work with had once traveled with Jimi Hendrix on tour.

The machine will gradually feel less like a machine.

My Rule #2 is: Don't whine. To be sure, doctors have plenty to complain about: computer system crashes, 2 a.m. pages, insurance companies, work getting dumped on you at 6 o'clock on a Friday night. We all know what it is to be tired and beaten down. Yet nothing in medicine is more dispiriting than hearing doctors whine.

Anyone who has played high school sports knows the dynamic I'm talking about. Morale is an elusive and fragile entity. My southern Ohio hometown high school tennis team traveled up to 75 miles through Appalachia for matches against other teams. We were undefeated. But when the weather got hot, a few bad calls went against us, the matches grew close, and that long un-air-conditioned van-ride home began to loom, the griping would begin to well up. It was all Coach Roach could do (that really was his name) to keep us from giving into defeat. He'd yell and stomp—"What are you cry-babies belly-aching about?", and since he was also the school psychologist, we'd finally remember what we were there for.

The practice of medicine can go the same way. It is a team sport with two differences: the stakes are people's lives and we have no coach. This latter is the most relevant difference. Doctors are supposed to coach themselves. We have no one but ourselves to buck us up. But we're not good at it. Wherever you find doctors—sitting with fellow residents in the hospital cafeteria, waiting in a conference hall for grand rounds to start—you will find the natural pull of conversational gravity is toward the litany of woes all around us.

Resist it. It's boring, and it will get you down. I'm not saying you have to be all Julie-Andrews-Mary-Poppins about everything. Just be prepared with something else to talk about: An interesting patient you saw, an idea you read about, even the weather if that's all you've got.

Then see if you can keep the conversation going.

Rule #3 is: Count something. No matter what you ultimately do in medicine—whether you go into purely clinical practice or work in research or business and never touch a patient again—a doctor should be a scientist in his or her world. In the simplest terms, this means that we should count something. The laboratory researcher may count the number of tumor cell lines with a particular gene defect. Likewise, the clinician might count the number of patients who develop a particular complication—or even just how many are seen on time and how many were made to wait. It doesn't really matter what you count. You don't need a research grant. The only requirement is that what you count should be interesting to you.

When I was a resident I began counting how often one of our patients had something forgotten inside them after surgery—either a sponge or an instrument. It wasn't very frequently: about one in 15,000 operations. But they could be badly injured. One patient had a 13 inch retractor left in him and it tore into his bowel and bladder. Another had a small sponge left in his brain, which caused an abscess and a permanent seizure disorder.

Then I counted how often such cases happened because the nurses hadn't counted all the sponges like they were supposed to, or because the doctors ignored nurses' warnings that something was missing. It turned out to be hardly ever.

I got a little more sophisticated and compared patients who had stuff left inside them with ones who didn't. It turned out that the mishaps predominantly occurred in patients with emergency operations or operations in which something unexpected was encountered—like a cancer when one expected appendicitis. Things began to make sense. If nurses have to track fifty sponges and a couple hundred instruments during an operation, already a tricky thing to do, it is understandably much harder under emergency circumstances, or when unexpected changes require bringing in lots more equipment. Punishing people more therefore wasn't going to eliminate the problem. Only a technological solution would—perhaps a way of scanning for sponges and instruments in everyone.

If you count something interesting to you, I tell you: you will find something interesting.

My Rule #4 is: Write something. It makes no difference whether you write a paper for a medical journal, five paragraphs for a website, or a collection of poetry. Try to put your name in print at least once a year. What you write does not need to achieve perfection. It only needs to add some small observation about our world.

One should not underestimate the effect of one's contributions. The physician and poet Lewis Thomas once pointed out, "The invention of a mechanism for the systematic publication of fragments of scientific work may well have been the key event in the history of modern science." For by soliciting modest contributions from the many, it has produced a store of collective know-how with far greater power than any one individual could have achieved. I think this is as true outside science as inside.

One should also not underestimate the power of the act of writing itself. I did not write until I became a doctor. But once I became a doctor, I found I needed to write. Medicine is retail. We provide services to one person at a time, one after another. It is a grind. For all its complexity, it is more physically than intellectually taxing. But writing let me step back, engage as something more than a retailer, and think through a problem. Even the angriest rant forces the writer to achieve a degree of thoughtfulness.

Furthermore, by putting your writing out to an audience, even a small one, you connect yourself to something larger than yourself. The first thing I ever published was a diary in an online magazine of five days as a surgical resident. I remember that feeling of having it come out in print. One is proud but also nervous. Will people notice it? What will they think? Did I say something dumb? An audience is a community. The published word is a declaration of membership in that community, and also of concern to contribute something meaningful to it.

So choose your audience. Then write something.

Rule #5, my final rule for a good life in medicine, is: Change

In medicine, as in any human endeavor, people respond to new ideas in one of three ways. A few become early adopters, as the business-types call them. Most become late adopters. And some remain persistent skeptics, who never stop resisting. A doctor has good reasons to adopt any of these stances. When Joseph Murray and Francis Moore performed the world's first successful kidney transplant

in the hospital behind us fifty years ago, but also had 30 deaths; when a French gynecologist first pointed his laparoscope in a new direction and used it to take out a gallbladder; when cholesterol-lowering drugs first came out; when the first electronic medical record was invented—who was to say whether these were truly good ideas or not? We have seen plenty of bad ones. Frontal lobotomies were once done for control of chronic pain. Vioxx turns out to cause heart attacks. Viagra, it was recently discovered, may cause partial vision loss.

Nonetheless, make yourself an early adopter. Look for the opportunity to change. I am not saying you should take on every new thing that comes along. But be willing to recognize the inadequacies in what we do and to seek out solutions. As successful as medicine is, it remains replete with uncertainties and failure. This is what makes it human, at times painful, and also so worthwhile.

You become a doctor today, and the choices you will make with your patients will be imperfect but nonetheless alter their lives. There will come a time when, because of that reality, it seems safest to do what everyone else is doing—to be just another white-coated cog in the machine.

Don't let yourself be. Find something new to try, something to change. Count how often it succeeds and how often it doesn't. Write about it. Ask a patient or a colleague what they think about it. See if you can keep the conversation going.