ANNALS OF MEDICINE

THE ASSUMPTIONS DOCTORS MAKE

Learning to be a physician, I realized over and over again that I was seeing only part of the picture.

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Illustration by Gustavo Magalhães

I'd just started seeing patients, as an intern at Ben Taub Hospital, in Houston, when the senior resident on my team received notice from the emergency room that a woman needed to be hospitalized overnight, to receive treatment. He wasn't the type to argue with other doctors over the phone. Still, it was clear by his questions—"So no fever? And she's totally hemodynamically stable?"—that he wasn't impressed by what the doctor in the E.R. was telling him. After hanging up, the resident grabbed a colored marker and wrote a name on the whiteboard in our team room, followed by the letters "U.T.I." He capped the marker with a frustrated look: patients aren't usually hospitalized for urinary-tract infections.

I hurried down to meet my new patient, armed with "Pocket Medicine"—my Bible, a book summarizing all of internal medicine in microscript. Downstairs, the hospital's E.R. was in full, frenetic swing—the nurses drawing blood, the techs gathering vital signs, the doctors migrating from stretcher to stretcher in small teams. I followed the numbers posted above each stretcher until I found the one that I was looking for. A young and fit Hispanic man in his thirties sat at its foot, his jeans and T-shirt looking stretched and worn. A woman lay in the bed—my patient. I introduced myself, explaining who I was, before sliding past him to collect her history.

I asked the woman a few questions and got little response. In the way she moved her eyes, I could see why the E.R. doctor had referred her to us. She was in her forties, broad-shouldered and tall, with bushy black hair and wide pupils that drifted from me to a nearby noise or a passing nurse, then back. I wondered if I had the wrong language, so I tried Spanish.

"*Ella sólo habla inglés*," the man said. She only speaks English.

Now it was his turn to field my questions. Instead of short, inattentive nods, I got descriptions, in Spanish, about how frequently the woman was urinating. It was happening so often that she had to wear diapers.

"Since when?" I asked, looking at her. Once more, her eyes drifted away and then quickly returned before drifting again.

I turned toward the man. "Is everything O.K. with her?" I said.

His look—not toward me, but directed at her—said it all. "This is how she is now," he said. When they'd married, a few years earlier, she'd been different. They'd lived the routine life of couples: working, eating together, going out occasionally. But, since the mental deterioration started, it had been relentless. The woman was now someone he barely recognized. She looked much older than him, but in fact they were similarly aged.

I asked him more questions, and soon enough I'd built a hypothesis in my mind: this woman had early Alzheimer's—or Lewy body dementia, or Wilson's disease, in which the copper we eat isn't properly processed, leading to buildup in the brain. I flipped to the neuro chapter in "Pocket Medicine." I decided that I'd organize my patient history, which I'd soon present to my senior resident, around these neurological conditions, rather than the urinary-tract infection.

On the way back upstairs, I happened to run into Robert Graham, one of the most well-known internal-medicine professors at the hospital. Some people called Graham the Cowboy Doctor: on his weeks off, he lived on a ranch, hunting animals and farming tomatoes. He'd once shot and killed a man who had broken into his home, and often shared stories about his boxing days, as a white kid who was often taken in by a Mexican family in Houston's rough Third Ward.

Graham presided over our daily Morning Report, at which we reviewed interesting medical cases. If he found a case interesting, he jotted notes on his Styrofoam coffee cup. More often—if a vital sign or a finding from a physical exam sounded incorrect to him—he grilled the presenter. If someone cited a journal article, he pried into how the study had been conducted—"They enrolled only five patients?"—and whether we could derive any real meaning from it. Doctors, he believed, must admit when they're wrong—an insight we'd discussed after he read "The Confessions of St. Augustine." He argued openly and vigorously with other professors, but always with the same calm, measured demeanor. I imagined that he shot his rifle this way, too.

I told Graham the story I'd just gathered from my new patient and her husband. "Something seems wrong," I said. I kept on repeating the part that stood out to me most: "She's still young." I mentioned the diapers, how her eyes couldn't keep still. I said that this was the first time anybody had mentioned her cognitive problems—which grabbed Graham's interest.

"Let's go," he said, motioning quickly toward the computer. He logged into the system with two index fingers. I gave him the patient's name and medical-record number and he began scrolling through the data.

"What's she in for?" Graham asked.

"U.T.I.," I said.

He examined the woman's latest head CT scan. Then he released the mouse and sank back in his chair. "Well, I definitely don't think she has early-onset Alzheimer's, or any of that other stuff you mentioned," he said.

I began to defend my reasoning, though not too aggressively. "But she's so young," I said. "She can hardly talk. She can't control her urine."

Graham's blue eyes lasered in on me. "This woman has untreated diabetes," he said. "It's caused her to have thousands of small strokes that have killed all these parts of her brain. That's what's causing her dementia."

"I didn't know it could do that," I said—a response that revealed my ignorance. I'd never even looked up the symptoms of untreated diabetes; I had assumed that a patient would never grow this sick from a common and manageable disease. "Pocket Medicine," in its section on "Change in Mental Status," described only problems such as vitamin deficiencies or opiate intoxication—afflictions that its writers presumably believed were a danger to typical patients. There was no listing for "untreated diabetes." The book didn't mention poverty, or a lack of health insurance—conditions that were common among patients at Ben Taub—as a cause of any illnesses. I was starting to realize that its perfect world, in which medicine straightforwardly confronted disease, was a fiction.

As I spent more time in the hospital, a belief began to take shape in my mind: whether someone had insurance could affect their health as much as, or possibly more than, their genetics. I wasn't the only one wrestling with this idea. In 2017, *Annals of Internal Medicine* published a review of eleven studies that examined whether people are more likely to die if they lack health insurance. Two of these studies found that Medicaid expansion reduced adult mortality by as much as six per cent. Another paper described a randomized, controlled study of a group of people in Oregon who were given Medicaid through a lottery. Researchers looked at how the winners fared compared with people who remained on the Medicaid wait list. People who received coverage were far more likely to have their diabetes diagnosed and managed.

Diabetes is an expensive illness. Even for people with health insurance, the cost of needles, syringes, extra medical visits, and lost wages can add up to an average of forty-eight hundred dollars a year—around a tenth of an average American salary. The uninsured pay much more for care, and often have less income. One out of every ten Americans is diabetic; in 2017, twelve per cent of all patients who visited the E.R. were diabetics; and nearly eight per cent of the work done in nursing homes involved treating the effects of the disease. My forty-something patient now needed the kind of twenty-four-hour care one gets in a nursing home—her husband acted as her nursing attendant, feeding her, bathing her, making sure she didn't fall, or burn herself on the stove. Of course, neither she nor her partner could afford it.

Not long after the woman entered the hospital, she left: my supervising resident discharged her, after starting antibiotics for a U.T.I. that we didn't think existed. (The symptom of urinating on herself was probably attributable to her dementia.) The most valuable thing we did, apart from normalizing her blood sugar and giving her a prescription for insulin, was bringing in a social worker who could help her partner look for community resources to help with her care. I never learned if he was able to access that help, or if she continued her decline. I never saw the woman or her husband again.

The following year, I received a page about a patient whose blood sugar was too high for him to leave the hospital. The E.R. staff had pricked his index finger and fed the test strip into a glucometer. They'd thought the machine might be broken: a normal blood-sugar level is around a hundred, but the machine read "> 499." Another test confirmed that his blood was nearly saturated with sugar. "He can't leave like this," the E.R. doctor told me over the phone. And so I descended the stairs dutifully to the E.R. with a plan already brewing in my mind: I would lower my new patient's blood sugar enough to get him home.

I was now a senior resident, and Graham was my supervisor. Nothing about the patient's history or physical exam changed my understanding of the case. After organizing my presentation, I called Graham so that he could sign off on my plan of attack. We met at the patient's bedside. "Thirty-eight-year-old male, history of uncontrolled diabetes, presents with dizziness and malaise," I said. I made sure to take into account some of the nuances other residents might have missed—for instance, I noted at what times in the day the man took his already sizable doses of insulin—and concluded with my plan: an even larger dose of insulin. I started to explain the dose I wanted to give.

"Oh," Graham said, stopping me. "I'm not sure I'd do that."

He turned to face the patient in the stretcher, who weighed more than four hundred pounds. Now Graham led the conversation. He asked the man some of the questions I'd already asked, like what he ate. But he also asked him when he ate, with whom, and if he ever found himself feeling extremely hungry after injecting insulin.

“I gotta eat,” the man said of how he felt after an injection.

Graham told the man that he was caught in a vicious circle. Higher doses of insulin were pushing sugar into his cells; this had the effect of making him hungry, which caused him to eat, which caused his blood sugar to go up again, which resulted in the need for more insulin, which resulted in more eating, and on and on. The man nodded.

Graham asked him about his activity level, too—not only if he exercised, but also who he walked with, where he would go, if he had a bike at his house or a gym nearby.

“I need to find one,” the man said.

I had planned to keep my patient in the hospital for a few hours, or a day at most—long enough to document a normal glucometer reading. But Graham told us both that we would be keeping him in the hospital for at least three days. “Your diabetes is curable,” he said. “Every hour, I want you to walk around the hospital three times.” He turned to me. “Cut his insulin in half!”

An average diabetic patient on insulin might use ten, twenty, or fifty units of insulin daily. At home, the man took nearly a hundred units each day. I knew that Graham liked making maverick moves; I didn’t argue with him partly because I doubted his plan would work.

“Just remind him to walk,” I told the nurses.

The new dose controlled his blood glucose well, and so our new goal was to wean him fully off of insulin. For two days, the man walked around the hospital every hour, prodded by me, the physical therapists, the nurses, and Graham. He ate only a low-carbohydrate diet. And, for two days, I documented blood-sugar levels that never went above a hundred and ten. My assumptions had been wrong. Insulin wasn’t the solution; what my patient needed was a whole new approach to his diabetes. Before he left the hospital, I told him to keep walking at home. "I can't wait," he said. I never saw him in the emergency room again, and I never heard whether he kept up with this new approach to his diabetes. What I knew for sure was that a seemingly insurmountable problem had been at least temporarily solved. Graham had understood the science of diabetes well enough to tailor a plan for this man in particular.

I was starting to think that good medicine occurred where three major forces intersected. Everything around me in the hospital—the CT scanners and glucometers, the clean hallways, the armies of clinicians—represented science, the first force, which gave medicine its precision. Whenever Graham railed against residents and students for not thinking clearly, he was emphasizing the rigors of science. But science didn't come for free. Money was also a force: doctors had to work at the intersection of science and cost. Finally, there were people. Without human beings, of course, there is no medicine. But I'd come to think of "people" as a principle of care—it meant connecting, trying to understand your patient as a person rather than a set of symptoms. This required communicating clearly, insuring that patients received personal attention, and doing so with respect and compassion. But it also involved a doctor's personal style. Graham's wry, skeptical, outgoing manner had helped him learn key information about the diabetic man—and this, in turn, had allowed him to evaluate his diabetes with a more precise scientific lens.

I'd learned about this aspect of doctoring from my dad. Once, he'd brought me, my mother, and my girlfriend along as his guests to a gala held by the Houston Hispanic Chamber of Commerce. I was in line for hors d'œuvres when I felt a tap on the shoulder: "Be right back," my dad said, already walking away. We didn't see him again for almost an hour. It turned out that one of his patients had gone into labor; he'd delivered the baby while wearing a surgical gown over his tuxedo, then returned to the party. "She liked it," he said, of his outfit. Looking back, I wondered if his style as a doctor might have accomplished something, as Graham's had: could seeing the tux have relaxed the mother, helping her push harder? In medicine, there are always incalculable variables that can tip a patient one way or another. The way a doctor dresses, or conducts herself, or pronounces a word with or without respect and kindness can influence whether a patient decides to take a medication or participate in physical therapy or even undergo a procedure.

Science, costs, and people—these forces all had to balance for medicine to succeed. The more I encountered patients without access to basic care, the more I realized that, in many cases, costs had become the dominant force shaping outcomes. The people part of medicine had taken a back seat; even science was playing defense, since widely available treatments weren't being delivered to those who needed them. Ben Taub, where I worked, was Houston's safety-net hospital. It ran on public funding and was meant to serve people without resources. This insulated me somewhat from the larger realities. A for-profit or nonprofit hospital would almost certainly not have allowed a doctor to keep a diabetic man on the ward for two extra days, just to test an unlikely theory about his blood sugar. It probably would've discharged him as quickly as possible.

As I thought more about cost, I started attending more to the rationing of health care. I'd encountered the word "rationing" in articles and op-eds, and I knew that the idea of rationed care stirred intense emotions—it was scary to think that, if medicine or equipment wasn't available to you when you needed it, you might die. After the pandemic began, a number of doctors wrote articles about the moral distress of deciding to save one person over another. But, even in normal times, rationing goes on, as an intrinsic feature of supply and demand. It's a necessary evil—the question is how we want it done.

I was surprised to learn how rationing worked at a publicly funded hospital like Ben Taub. Unlike doctors at some nonprofit and for-profit hospitals, I didn’t have the authority to order any antibiotic I liked; orders for more expensive antibiotics required the approval of the infectious-disease doctor, who was charged with “antibiotic stewardship”—making sure that nonstandard drugs weren’t prescribed unnecessarily or used in ways that could lead to drug-resistant infections. I found that many therapies and tests were “stewarded” this way at Ben Taub, with medical and financial experts weighing in on their value. (These experts weren’t in some faraway corporate office but in the hospital, and the medical stewards often dealt with patients themselves.)

Waiting was another form of rationing. Elective procedures were rationed through waiting lists, some of which could be lengthy—especially if so-called temporizing measures, which might alleviate a patient’s symptoms without providing a cure, were available. Diagnostic tests, such as MRIs, were rationed, too, with queues forming to use the machines and emergencies and trauma cases prioritized. It was rare for a necessary procedure or test to be totally unavailable within the safety-net system of which Ben Taub was a part; patients received chemotherapies and cancer care, for instance. But I learned that no transplants were performed. Their high costs would have made it too difficult to pay for all the other therapies. A cruder way to put this is that transplants don’t offer great value.

This wasn’t what I wanted to think when my new patient, who was just thirty-six, showed signs of liver failure. Utilitarianism sounds good until you meet a person left behind by the formula; that’s how it was with my patient and his mother. We stood around his bedside, listening to a medical student present the case. Afterward, I turned to the man’s mother. “*Cómo lo ve*?” I asked. How does he look to you?

She had long straight hair, gray with streaks of black. She had been preening her son, smoothing out his bedsheets. Now she stopped.

“God will protect him,” she said, forcing a smile.

We shook hands, and I nodded toward the man and he nodded back. In the hallway outside, the medical student and I spoke more pointedly. “He’s not a drinker?” I asked. I was grasping for hope: if binge drinking had damaged his liver, then maybe, with sobriety and patience, it would improve.

“He says he doesn’t drink,” the student said. “His mother says he doesn’t, and the notes say it, too.”

“He looks bad,” I said. “The liver enzymes keep going up.”

The medical student confirmed this with a quick glance at his notes. “Correct.”

By a quick mental hopscotch, I concluded that our patient was going to die within the next thirty days. He needed a liver transplant, but he was poor and uninsured. The initial out-of-pocket cost of a liver transplant typically runs upward of half a million dollars; outside of a small number of charitable procedures conducted each year, it’s impossible to receive one in the United States unless you are either insured or wealthy. No insurance, no liver transplant, no life. We had reached the limits of the safety net.

Resigned, I checked to make sure my facts were straight. “I assume he’s got no coverage?” I said.

“Correct,” the medical student said. “He used to have Medicaid.”

“What?” I asked.

“He had Medicaid briefly, then it was taken away,” the student said.

We reëntered the room. “*Señora*,” I said.“Did he have Medicaid?”

“*Antes*,” she said, Before. She sat down next to her son. “They took it away.”

That afternoon, the student and I sat down with a social worker. If Texas Medicaid had taken away our patient’s coverage because he earned too much, could it reëxamine his case now that his wages had decreased in the throes of illness? If he had been covered by Medicaid before, could he receive coverage again?

We waited on edge for three days as she investigated. Then, in the hallway, she gave us the bad news. He couldn't be reëvaluated. Life was slipping through his fingers on account of a few extra dollars on a disability check. My assumption now was that we would preside over our patient's death.

"Sometimes we write to congressmen about these cases," the social worker added.

It was a suggestion that I hadn't imagined. Maybe people could count for more than costs, after all. We started writing, believing that a cure was possible. ♦

This is drawn from "The People's Hospital: Hope and Peril in American Medicine."