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PERSPECTIVE

LESS IS MORE

Investigations Before Examinations

"This Is How We Practice Medicine Here"

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"All new patients have an x-ray before seeing the doctor." As a physician, I found this sentence baffling—I had been taught that the physician's role is to first see a patient, take a detailed history, perform an examination, and consider the differential diagnoses. Only then could I consider the investigations required to get closer to a diagnosis and determine a treatment plan.

As a patient, however, my experience was different. Previously healthy with no medical problems, I began to feel a growing discomfort in my shoulder after a mandated vaccination. As the weeks progressed, the pain worsened, ultimately inhibiting me from performing routine tasks such as getting dressed. My primary care physician suggested steroid injections or a course of oral anti-inflammatories together with corticosteroids. Reluctant to have more injections, I opted for my physician's suggestion of 1000 mg naproxen sodium daily while cautiously avoiding the oral steroids. As a small 160-cm woman, I am more sensitive than most to medications. In just 2 days, the naproxen gave me excruciating stomach pains—the treatment was worse than the shoulder pain. I berated myself for not questioning the physician about the high dosage. I stopped taking the medication and decided to try physical therapy.

Within minutes of entering an outpatient orthopedic clinic for the physical therapy referral, I felt as if I was on a conveyor belt. I gave my name to the receptionist and received numerous forms covering my insurance details, medical waivers, and a single page to note my symptoms and medical history. After completing the forms, I was summoned to someone sitting at a desk with a cash register. I handed over my credit card, driver's license, and insurance card for photocopying before returning to the waiting room. When my name was called again, I stood up and followed my escort. It did not dawn on me until I saw the large "X-Ray Department" sign that the assistant was not taking me to the physician. I asked her where we were going and was informed, "to get your x-ray." Thinking that there was a mistake, I stopped walking and informed her that I had not seen the doctor yet. The assistant replied with equal surprise, "All new patients have an x-ray before seeing the doctor." Still

puzzled, I asked her how the doctor knew I needed an x-ray. She did not know how to respond. I said that I would like to see the doctor first. Flustered, she led me back to the waiting room.

Finally, I see the physician. Opening my file, his first question was, "No x-ray?" "No," I informed him, "I want you to examine me first since we don't know if I need an x-ray." I explained my injury and how I thought I had chronic inflammation. The surgeon reluctantly obliged and awkwardly examined my shoulder before hurrying back to his stool to insist that I have the x-ray. I asked why, since inflammation would not show on an x-ray. He replied, "To make sure you don't have anything 'bony' going on." "Bony?" I enquired. "Such as what? What's your differential diagnosis?" He paused and answered, "Bone cancer." My eyes widened. "Bone cancer? You think my symptoms are likely to be due to bone cancer?" He replied, "Oh no, no..." muttered incoherently under his breath and trailed off stuttering, "this...this is...this is just how we practice medicine here."

An uncomfortable silence ensued. We both knew that this was an unsuitable answer. The surgeon then gathered himself and raised his voice assertively stating that I needed the x-ray. Chastising me for disrupting the clinic's operational efficiency, he scolded that I would have to wait longer. His frustrated tone suggested that I had done something terrible.

I recall sitting awkwardly, still on the examination table. I wanted to comply, to apologize even. But I also knew that this surgeon orders x-rays on all new patients before knowing anything about their symptoms. How many x-rays were performed on patients like me on the off chance of diagnosing bone cancer? What about radiation exposure and false-positive results? An x-ray was not my preference, and, despite the pressure, I was not going to let him scare me into thinking that I had a high probability of something more sinister than inflammation. Against the strong innate urge to cooperate, I stated, "I'd prefer a physical therapy referral. If my pain does not improve in 6 weeks, I'll return for that x-ray." It was difficult to state this. However, I had been in a similar situation at another hospital a year before, when regretfully as a compliant patient, I gave in to an unnecessary contrast computed tomographic scan. I prom-

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ised myself then that the next time imaging was ordered I would question why.

I received physical therapy, and my shoulder pain subsided. However, my encounters with the health care system still troubled me and indicated greater systemic issues. First, use of investigations before examinations undoubtedly contributes to higher health care costs, and unnecessary tests can lead to harm and lower-quality care. Second, although x-rays are low risk, the effects of radiation exposure are cumulative and can prompt investigation momentum—more investigations spawned by incidental or ambiguous findings.^{1,2} Third, my experience demonstrated the impossibility of patients “Choosing Wisely.”^{3,4} How can one state a preference regarding something that the clinic mandated before you see the physician? And even if you see the physician, entering the realm of uncooperative patients is arduous. Ultimately, patients follow orders in medical environments, no matter how wrong they feel. Rejecting advice risks undermining harmony and signals distrust—it is difficult (palpably unpleasant) to turn down even obviously biased recommendations.^{5,6} The larger the epistemic difference between physician and patient, the greater the likelihood that the patient will follow the physician’s advice. Although I applaud the ethos of patients discussing the necessity of tests with their physicians, the burden must revert to physicians to reduce the use of low-value health care.

Many factors contribute to the practice of conducting investigations before examinations—defensive medicine, profitable medicine, lack of knowledge or confidence. Crucially, as the surgeon admitted, it is the culture of American health care: This is how we practice medicine here. Some US physicians seem to be crippled by their reliance on tests in place of detailed histories and examinations. Incentive structures often support this practice and drive medical students to pursue procedural specialties and devalue cognitive or evaluative ones. Detailed histories, however, allow patients to voice their preferences, uncover possible sensitivities to medicine, and engage the patient. This goes beyond shared decision making (“Do you want option A or B?”) to incorporating each patient’s unique needs to offer personalized medically indicated investigation plans and patient-centered care.

Losing focus on the patient is an unavoidable consequence when physicians balance patient care with demands for an efficient or profitable clinic. Paying physicians for their time rather than per investigation or procedure would help align incentives. And, of course, the culture of medicine starts with medical education. If physicians truly value patient histories, examinations, listening, and engaging with their patients, they will reject investigations before examinations and be proud, rather than ashamed, to assert, “This is how we practice medicine here.”

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Editor's Note

Testing Before Seeing the Patient

Deborah Grady, MD

Practice varies around the United States and across each institution, but I would bet that every reader could give multiple examples of situations in which tests are ordered automatically before talking to or examining a patient. There are situations in



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which ordering tests before examining a patient is reasonable and promotes efficiency. Primary care physicians often order tests before sending a patient to a specialist. These tests are based on the primary care physician’s history and examination, sometimes with advice from the specialist, and tailored to the individual patient’s case. It would not make sense to send a patient to a pulmonologist for a chronic cough without first obtaining a chest x-ray. It is also reasonable for clinic protocols to include specific tests based in intake or triage information, such as an electrocardiogram for

any patient presenting to the emergency department with chest pain and shortness of breath. These tests are based on consideration of the patient’s symptoms and driven by well-accepted clinical practice.

However, as in the Perspective by Sah¹ in this issue of *JAMA Internal Medicine*, we all know of many situations in which tests are performed automatically for every patient with little consideration of the patient’s history, findings, or goals of care. For all the reasons eloquently elaborated by Sah,¹ this is generally a marker of poor practice that is wasteful, potentially harmful, and disrespectful of the patient as an individual.

Here’s a challenge: identify cases of inappropriate testing before examination in your own practice or in the practice of those physicians to whom you refer patients. Then implement a more patient-centered process.

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