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Countering Medicine's Culture of More

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Not long ago, I trained at an internal medicine primary care residency at Yale-New Haven Hospital. I had hopes of becoming a great diagnostician, and for that I was in the right place. The program had some of the best clinician-educators in the area, possibly in the country. What I remember most vividly were the morning reports.

We would discuss an interesting case at these daily meetings. The chief residents would take turns preparing and presenting. The majority of the time, the presentation focused on an inpatient case that was a "zebra," a diagnosis or complication that we rarely encountered—lupus cerebritis, fungal pneumonia, or catastrophic antiphospholipid syndrome. We rarely discussed a classic case of congestive heart failure or syncope. Zebras only added to the awe and interest.

One morning, a young man presented with fevers, tachycardia, and a progressively worsening rash. We were in the usual conference room, large enough for about 30 people. It had a long table in the middle where residents sat, with an array of faculty seated all along the walls of the room. Eyes were drawn to the white board, where the case slowly unfolded. It was an inviting place, permeated by the smell of coffee for the weary souls who had been on call all night. The voices and laughter of colleagues were welcoming after those lonely hours.

The progressively unfolding case left opportunities for questions. Possible diagnoses would expand with each successive query: "Was the patient immunosuppressed? Any history of weight loss? Was the rash blanching?" We discussed possibilities like endocarditis, Epstein-Barr virus (EBV), cytomegalovirus (CMV), dengue fever, idiopathic thrombocytopenic purpura, syphilis, leptospirosis, and on and on. My imagination and interest would go wild, and the residents would think about the next set of tests and treatments to go with the possible diagnoses. When someone did mention the correct tests or treatments, eager approval came from the chief or the faculty. I can't remember the last time dengue fever was seen in New Haven, Connecticut, but nonetheless, the possibilities were endless and exciting. The wealth of knowledge the faculty possessed about these zebras was intoxicating; I worshiped their wisdom.

The diagnosis in this case turned out to be toxic shock syndrome from staphylococcus aureus. The appropriate treatment would be broad-spectrum antibiotics to start,

including clindamycin, and intravenous immunoglobulin. There was a long discussion about the consequences of missing this diagnosis, including the possibility of multiorgan failure and death. But it became apparent to me in hindsight that we didn't talk about the appropriateness of the workup and treatment. We left wild-eyed about the possibility of toxic shock presenting with a fever and rash, but how probable was toxic shock compared to the usual nonpurulent cellulitis with a fever? How often did we actually see leptospirosis in the US? Perspective was lacking, in the sense that most people admitted to the hospital with cellulitis can and should be treated with IV cefazolin and monitoring. In addition, we didn't discuss the probability of CMV, EBV, or leptospirosis. I could just imagine an intern saying the next day in rounds, "I remember the morning report yesterday, and so I ordered CMV and EBV titers and a urine leptospira test." Discussion of costs and value was lacking during these conferences. A culture of "more" was consistently reinforced.

We are in a <u>crisis of overuse</u>, in which an estimated \$750 billion per year, or up to 30 percent of health care spending, is considered <u>wasteful</u> [1]. In response to major initiatives like the American Board of Internal Medicine's Foundation's <u>Choosing Wisely Campaign</u> and the Lown Institute's RightCare Alliance, awareness of overuse is increasing. We know that there isn't a single test or treatment that hasn't been linked to patient harm in some way, whether it is physical, financial, or emotional. For our patients' well-being, we cannot afford to continue this trend of overuse. The unnecessary clindamycin doses used in case of unlikely toxic shock may cause clostridium difficile colitis days later. When you ask of any admission with cellulitis and a fever, "could this be toxic shock?" the answer is inevitably yes. Could low-back pain be cancer? The answer is always "yes it can." But evidence has shown that not all low-back pain, for example, needs to be imaged [2, 3]. Sometimes all we need is a good discussion with the patient.

I am currently an academic hospitalist at Mount Sinai Hospital in New York. The push toward overuse in a major academic center in a city of this size can be overwhelming. The patients often travel long distances to get "the best" testing and treatment, and the thought still prevails that more is better. Clinical uncertainty alone can cause a clinician to order a barrage of tests or call in many consultants. The paucity of time and the complexity of a place this large also propagate overuse.

To address this problem, we started a monthly conference at which students, residents, and faculty review cases of overuse, called OCCAM's (overuse clinical case morbidity and mortality) Conference. The name is a reference to Occam's razor, a principle of parsimony, economy, and succinctness used in problem solving, often phrased in medicine as, "When you hear hoof beats, think horses, not zebras." We discuss costs and value and connect overuse to patient harm by labeling it a medical error and performing root-cause analyses. The goal is to create a safe environment for open discussion, in the hopes of preventing patient harm from overuse from happening again. Identifying these

cases can be challenging; we weren't trained to look for them in the past. We readily recognize bad outcomes from underuse—the death from a case of sepsis for which appropriate antibiotics weren't started early, or the poor outcome from ischemic stroke that wasn't recognized earlier. However, tracing a case of clostridium difficile back to treatment for presumed bacterial bronchitis is difficult.

These days, however, I have a sense of renewed hope. Perhaps it's my longing for a change in the quality of care. Perhaps because my students and residents know that my research is in high-value care they make a concerted effort to change their practices. Regardless, I do enjoy an intern's reciting a long presentation and squeezing in at the end, "Dr. Cho, we decided not to check labs tomorrow because we think it's unnecessary." Sure, daily labs may not cost much, but it's the change in culture that makes this statement invaluable.

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