ABSTRACT
In the United States, healthcare expenditures have continued to rise at alarming rates despite numerous strategies to contain costs. One area of focus that is underappreciated is doctor-patient communication about expectations of treatment. Studies have shown that clinicians’ misperceptions of assumptions about patients’ expectations are an essential component to our nation’s healthcare overuse problem. Strategies to address these misperceptions and assumptions as a method of reducing costs and providing higher-quality care to our patients are warranted.

OBSERVATIONS
As a resident physician early in his medical career, I have made some observations regarding the state of our healthcare system that I feel obligated to mention. I have pondered some of these previously, but it was not until last week’s patient encounter that I felt obliged to record my reflections.

It was a normal Friday morning in our academic institution’s primary care clinic. My first patient that morning was a middle-aged white female with a past medical history of surgically corrected congenital heart disease (CHD), fibromyalgia, restless legs syndrome (RLS), anxiety, and depression. She presented as a new patient to the clinic to establish care with the practice. Her main complaints during the encounter were baseline chronic thigh pain and lower back pain, which she attributed to fibromyalgia, and chronic insomnia that she attributed to RLS. Her medication list was extensive, including numerous drugs prescribed for her heart disease, fibromyalgia, and other chronic illnesses. When asked about the severity of her symptoms, she stated that they were uncomfortable but only rarely prohibited her from engaging in her everyday activities. After completing the history and physical exam, I formulated my assessment and plan, which included no changes to her medications, no additional imaging or blood tests, and a referral to physical therapy and cognitive behavioral therapy for further evaluation and management of her chronic pain and psychiatric symptoms. I presented my plan to that day’s staffing attending physician, whose facial expression quickly morphed from contentment to reluctance and hesitation. By the end of the patient visit, the finalized plan somehow included prescriptions for pramipexole for treatment of her RLS, blood tests to diagnose iron deficiency that potentially may be exacerbating her RLS, and a lumbar spine CT to evaluate her lower back pain.

What had happened? How did my original treatment plan, which I believed to be patient-centered, thorough, and well formulated, change so drastically? Is the patient’s overall health and quality of life improved with this more invasive, risky, and costly approach than the one that I originally developed? Is this the plan that the patient prefers, and would her opinion change with more detailed discussions surrounding the risks, benefits, and alternatives of each plan? How
much more will this plan cost, and does this higher cost necessarily mean better care? These questions, and numerous others, inspired me to search for answers through investigation and contemplation.

OVERUSE AND WASTEFUL SPENDING

Healthcare costs are skyrocketing in the United States at an unsustainable pace, with expenditures increasing from $253 billion in 1980 to $2.8 trillion in 2012.\textsuperscript{1-2} Healthcare spending in the United States continues to grow at a rate of 4\% per year—the highest in the world.\textsuperscript{1-3} Although there are numerous causes for this problem, many argue that wasteful and possibly harmful overuse of medical services is an integral factor.\textsuperscript{1-8} In fact, overuse has been shown to contribute to 30\% of healthcare expenditures, while focusing on the reduction of wasteful medical services in high-expenditure areas has lowered the overall cost of healthcare by 20\% in those regions.\textsuperscript{4-7} For example, Sirovich et al showed that 47\% of physicians in high-expenditure regions schedule hypertensive patients at least every 3 months, while only 19\% of physicians in low-expenditure regions schedule such frequent follow-up visits, with no difference in quality of care or symptom improvement.\textsuperscript{3} Moreover, despite no proven improvements in quality or patient satisfaction, primary care physicians in high-expenditure regions report seeing their patients more frequently, recommend more screening tests with uncertain benefits, and order more tests and interventions than their low-expenditure counterparts.\textsuperscript{3}

In spite of this proven burden on our nation’s healthcare system, studies show that many physicians do not prioritize ameliorating wasteful use of medical services. In a survey of 2500 physicians, only 36\% of respondents felt physicians have a “major responsibility” for lowering healthcare spending.\textsuperscript{5} Furthermore, of the 439 quality indicators defined in the RAND Quality Tools, only a very small fraction focus on overuse.\textsuperscript{2,3,6,7}

OVERUSE THEORIES

There are many reasons physicians in the United States overuse medical services. Some of these include payment systems that disproportionately reward testing and procedures, the expectations that patients equate testing and interventions with better care, and defensive medicine (ie, medical practices used to avert the possibility of malpractice suits).\textsuperscript{4,8} To describe all overuse theories, physicians either believed that they overprescribe because they assume that their patients expect more medications, testing, and procedures. They believe that this is a way of doing something rather than nothing and that it exemplifies thoroughness and caring.\textsuperscript{5}

Despite being sparse, the literature focusing on clinicians’ misperceptions of and assumptions about patients’ expectations regarding medications, testing, and procedures.\textsuperscript{5} I am in complete agreement with theories proposing that clinicians—regardless of evidence-based indications—prescribe, order procedures, and test to placate their patients.\textsuperscript{4,5} Simply put, physicians overprescribe because they assume that their patients expect more medications, testing, and procedures. Although the United States’ overuse epidemic is multifactorial, one cause of it that is understudied is the misperceptions and assumptions of patients’ expectations regarding medications, testing, and procedures.\textsuperscript{6,7} For example, Britten et al showed that many misunderstandings and inaccurate assumptions exist between physicians and patients with regard to medication prescribing and that these typically lead to inappropriate prescribing by clinicians to preserve relationships with patients. Physicians either believed that they knew their patients’ preferences or that this knowledge was not important.\textsuperscript{11} To compound this problem, patients typically do not receive enough information from their physicians to formulate informed expectations. For example, Tarn et al showed that family and internal medicine physicians mention adverse effects to only 33\% of their patients, with a mean medication communication index (MCI) of 3.1/5, indicating that they communicate only 62\% of necessary elements of new medications to their patients.\textsuperscript{12} Ha et al presents numerous barriers to good communication in the doctor-patient relationship such as deteriorating physician-communication skills, nondisclosure of information such as adverse drug reactions and complications from procedures, doctor-avoidance behavior surrounding difficult topics such as uncertainties in diagnosis and treatment failures, discouragement of collaboration between physicians and patients to create optimal care plans that suit both parties, and resistance by patients to engage in the medical decision-making process.\textsuperscript{14}
Gathering and reflecting on the data from these studies, combined with my anecdotal experiences, it is clear that there is room for improvement in physician-patient communication. Physicians do not know patients’ expectations—and patients generally do not mention them—as they relate to additional testing, procedures, and medications. Due to this miscommunication and disconnect, physicians are likely assuming that patients insist on treatment and investigation for each and every symptom with additional medications and testing, respectively. It is also seems apparent that physicians believe patients will only be satisfied if they “do something,” which takes the form of additional testing, procedures, and prescriptions. Unfortunately, as we have seen, many of these additional services are not needed. In addition to being wasteful and burdening the system with unendurable costs, overuse of medical services comes with its own potential for negative effects on patient-health such as false-positive tests, procedure-related complications, adverse medication effects, and drug-drug interactions..

POSSIBLE SOLUTIONS

The solution to this physician-patient communication predicament, and how it might remedy our healthcare system’s overuse epidemic, is understudied and unclear.6,8,14 Ha et al propose that our nation focus more on communication training, conflict management, collaborative communication, and health beliefs.14 Another strategy might be research focusing on allocating time in the physician-patient encounter to discuss expectations and goals of treatment. Of course, many might claim that adding time to an already jammed schedule could potentially have significant financial, reimbursement, and lifestyle consequences for clinicians and practices. However, research might show that this additional time can be regained downstream in future appointments as test results, procedure complications, and adverse medication effects would not require review. Another potentially invaluable strategy to improving our system’s overuse problem is research focusing on dedicating time in the encounter to reviewing risks, benefits, and alternatives of every new procedure, medication, and test ordered.5,12 Again, one might claim that this additional time might be burdensome to clinicians, but a rebuttal to this argument could be that these discussions will save time in future appointments. In addition, the length of a physician’s visit has been shown to be negatively associated with a physician’s malpractice claim status and overprescribing practices and positively associated with patient and physician satisfaction.15

It is clear that the US healthcare system wastefully spends money on unnecessary services. Research suggests that this overuse and negligent spending has had negative impacts on our system and may be detrimental to the overall health of our country. One hypothesis for this overuse epidemic that I have witnessed early in my clinical career entails clinicians’ assumptions about and misperceptions of patients’ expectations as they relate to additional testing, medications, and procedures. Additional research should focus on exposing these false perceptions and assumptions as a method of reducing costs and providing higher-quality care to our patients.

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