EDITORIAL AND COMMENT

How Can We Improve the Efficiency of Specialty Care?

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Nearly one third of health spending is considered potentially wasteful, and much of this consists of unnecessary or low value care.^{1–3} Recent efforts to reduce low value care, such as the American Board of Internal Medicine's Choosing Wisely campaign, have identified lists of low value services by specialty. This effort has accelerated the national conversation among clinicians, patients, and policymakers about the potential harms and costs of low value care. But in a recent study, 26 of some of the most important items on the Choosing Wisely list represented only between 0.6 and 2.7 % of overall health spending among Medicare beneficiaries.⁴ So how do we reconcile this modest figure with the well-documented torrent of potentially wasteful care?

Lists of low value services have typically focused on tests and treatments thought to be unnecessary, but usually not on the type and frequency of physician visits. In particular whether the rate of visits to specialists can be considered “low value” is unexplored in part because of (1) heterogeneity of patient needs, (2) wide variation in the attributes of consulting physicians in terms of knowledge, experience, confidence, and specificity of the referral question, (3) broad-ranging roles of specialists (e.g., cognitive consultants, proceduralists, co-managers of chronic disease), and (4) a lack of data on how to approach the appropriateness of specialty visit frequency for various chronic conditions.⁵ Specialty visits represent an often overlooked yet substantial proportion of health spending through direct costs as well as indirect costs, as specialty visits are a major medium for ordering tests, medications, and referrals—all leading to further downstream utilization.

In this month's issue of the *Journal of General Internal Medicine*, Clough and colleagues seek to illuminate these issues by evaluating variations in outpatient specialty visits and their subsequent association with health spending and self-reported health status.⁶ Using a 20 % random sample of Medicare fee-for-service beneficiary claims data from 2012, they found marked regional

variations in rates of outpatient specialty visits. Importantly, they determined that the likelihood of visiting a specialist is positively associated with greater overall health spending, but had little to no association with self-reported health status or patient satisfaction. They also found that regions within the lowest quartile of the specialist index (a ratio of observed/expected specialist visit frequency) had the lowest patient satisfaction measures regarding access to specialty care.

The major threat to the validity of their analysis is that the prevalence and severity of disease can explain differences in specialty visit frequency. While it would be tempting to use claims-based comorbidity measures to assess disease prevalence, the authors recognized that these techniques suffer from observational intensity bias and up-coding bias that is associated with the frequency of specialty visits. Hence the authors use different methods to perform multiple sensitivity analyses including: (1) comparing specialty visit variation with patient-reported health status (with the latter being expected to worsen with higher chronic disease prevalence), (2) comparing specialty visit variation with data from regional Centers for Disease Control data on chronic disease prevalence, (3) assessing whether increased use of specialty visits is associated with increased primary care visits for the same conditions, the latter being expected to most likely rise concomitantly with any rise in disease prevalence, and (4) assessing whether age, sex, and race (among the strongest predictors of chronic disease prevalence) explain any increase in specialty visit frequency. All of these sensitivity analyses suggested that specialty visit variation is not explained by disease burden, albeit we can never be completely certain, short of directly sampling comorbidity data either from chart abstraction and/or from patients themselves.

How do we interpret these findings in the broader context of rising healthcare costs? In a different study evaluating Choosing Wisely measures using Medicare data, the difference between the 95th percentile and the 5th percentile region in terms of payment per beneficiary was \$38.⁴ In contrast, Clough and colleagues found that the difference in per-beneficiary payments in the highest quartile of regional use of cardiology visits was \$162 more than the lowest quartile, and most other specialties had comparable or greater differences in spending compared with the Choosing Wisely services. Moreover, their calculations are conservative because these data do not include

the facility fees often associated with hospital-based ambulatory care.

Based on these findings, variation in specialty visit frequency may represent a substantial opportunity to reduce unnecessary spending in our healthcare system. But many challenges remain before we can realize these savings. How do we determine the “right” number of specialty visits? Unfortunately, this question is complex and context specific. Important lessons may come from integrated health system providers such as the Veterans Health Administration or Kaiser Permanente, who prevent unnecessary specialty visits using intra-operable electronic health records and non-visit-based care.⁷

In our view, there are four central strategies to consider. First, we call for rigorous observational analyses on the appropriate number of visits for a given patient, disease, and referral type (e.g., procedural vs. cognitive, etc.), followed by pragmatic and/or randomized controlled trials measuring the impact of various specialty follow-up arrangements on important patient outcomes. These findings in turn can help inform evidence-based guidelines on visit frequency.

Second, based on this research we need to create point-of-care decision support tools to provide evidence-based guidance on referrals and follow-up type and frequency. For example, studies suggest that cardiologists compared with generalists provide more evidenced-based care for patients with congestive heart failure,⁸ and the effect is likely more pronounced for patients at the highest risk of hospitalization and death. Decision support tools can recommend against potentially low value referrals or excessive visit frequency (e.g., quarterly cardiologist visits for well-controlled hypertension without end organ damage or other risk factors) and suggest potentially high value referrals with high visit frequency (e.g., bi-monthly cardiologist visit for a patient with atrial fibrillation and end-stage systolic heart failure who is awaiting transplant while at high risk for multiple re-hospitalizations). But these steps are only the beginning. Current claims-based approaches that identify high-risk patients can only go so far in predicting risk, and the next generation of decision support tools will employ artificial intelligence and natural language processing, where programs “read” physician’s notes in order to build more nuanced risk models and offer clinical guidance on specialty visits (in the future, these programs will be able to listen to the patient-doctor conversation and provide real-time education and feedback when needed). Ideally, as these algorithms improve by self-learning (the hallmark of artificial intelligence), they will free up specialty visit slots for complex patients who really need them—thereby improving access. Hopefully, these innovations could partially address the authors’ concerning findings on lower satisfaction with access to specialists in regions

with the lowest specialty visit use, which suggests potential underuse of needed specialty services.

Third, we need to develop and expand non-visit-based strategies for specialty care delivery such as online patient portal messaging, e-consults, telemedicine, and *OpenNotes* and *OurNotes*, where doctors invite their patients and families to read and contribute to their medical records, off-loading history-taking from the specialist and promoting patient engagement with their chronic conditions.⁹ Managing patients’ conditions outside of in-person office visits may be more patient centered and potentially more cost-effective.

Fourth, we need policies and payment arrangements to support these efforts. The Centers for Medicare and Medicaid Services (CMS) is in the midst of significant changes to physician payment under Medicare, with the goal of moving from volume-based payment to value-based payment. These changes include payment for chronic care management,¹⁰ accountable care organizations, and patient-centered medical home programs, and they should promote more integrated and efficient use of specialty care, including potential reimbursement for many of the non-visit-based strategies addressed above. Importantly, policymakers should also assess regions where access to specialty care is limited and consider policies that incentivize greater use of specialty services, such as increasing payment for specialty care in these potentially underserved areas.

Clough and colleague’s current work demonstrates that there is marked variation in specialty visit frequency in Medicare, at high cost, with little to no association with patient-reported health status or patient satisfaction. Further investigation is needed to understand the appropriate frequency of outpatient specialist care for specific chronic conditions to maximize the efficiency of care delivery and reduce unnecessary healthcare spending.

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