EDITORIAL

The Next Frontier of Less Is More—From Description to Implementation

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High health care costs in the US and the recognition of patient harm that is associated with unnecessary care have led to multiple initiatives to decrease low-value care. *Low-value care* is broadly defined as services that are of limited to no benefit to patients, may cause patients harm, and lead to waste of health care resources.

In 2010, the *Archives of Internal Medicine* (now *JAMA Internal Medicine*) introduced the Less is More series with the goal of providing evidence on the harms as well as the benefits of care and promoting research on effective steps to reduce low-value care.[1] The National Physician Alliance's Top 5 initiative,[2] aimed at providing guidance on the most common areas of medical overuse in family medicine, internal medicine, and pediatrics, spurred further interest in recognizing specialty-based low-value care, an effort that later developed into the Choosing Wisely campaign.[3] Many other efforts, such as the Lown Institute's initiatives on low-value care, projects of the Costs of Care organization, and various university-based centers across the US, have contributed to an awareness of the prevalence of low-value care and its downstream effects. However, there is still a wide gap between the pervasiveness of low-value care and success in reducing such care with its associated patient harms and societal costs.

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The initial phase of the Less is More series in *JAMA Internal Medicine* focused on encouraging evidence to help weigh the risks and benefits of medical care. A conceptual map of the potential negative consequences of medical overuse demonstrated the breadth of harms that result from low-value care beyond financial consequences to the patient and society. These included adverse effects of treatments and procedures, invasive and dangerous follow-up tests and treatments, overdiagnosis, psychological harm, treatment burden, social consequences, and dissatisfaction with health care.[4] Such harms of more care can have substantial downstream effects. For example, routine preoperative electrocardiograms before cataract surgery have been associated with a cascade of testing, treatment, and specialist referral at an estimated annual cost of $35 million across all Medicare beneficiaries,[5] while low-value testing in annual health examinations has been associated with more specialist visits and additional noninvasive and invasive testing at 90 days.[6]

Understanding the scope of harm associated with medical overuse spurred the development of validated measurement tools in assessing the prevalence of low-value care. In 2014, Schwartz et al[7] developed claims-based measures of low-value services that have since been used in multiple studies to document the widespread prevalence of medical overuse. Ganguli et al[8] used claims-based data to show that up to 28% of eligible Medicare beneficiaries in 556 health systems included in the Agency for Healthcare Research and Quality Compendium of US Health Systems received low-value services, with preoperative laboratory testing being the most common category. A wide variation was observed in delivery of care, with higher prevalence of low-value care associated with lack of a major teaching hospital, higher proportion of patients belonging to racial and ethnic minority groups, and lower proportion of primary care physicians. One of the most predictive variables was geographic location. Health systems in the South and West provided more low-value care than those in the Northeast or Midwest, findings supported by other studies that show the highest medical overuse in the southern US.[9]

One strategy to reduce low-value care has been the Choosing Wisely campaign developed by the American Board of Internal Medicine (ABIM) Foundation and Consumer Reports. Choosing Wisely enlisted multiple professional societies to develop lists of low-value services that should be avoided. While Choosing Wisely has raised awareness of the problem of low-value care, it has not been shown to be associated with reduced use of low-value services.[10] In this issue of *JAMA Internal Medicine*, Ganguli et al[11] suggest that this failure might be partly because the services deemed low-value by professional societies are generally low cost and do not target high-cost services that have a greater financial outcome within the health system. However, many low-value, low-cost services, such as blood tests and imaging studies, are frequently used and should be addressed.[12] There are many other factors that drive use of low-value care, such as a culture that highly values testing and procedures, even without evidence of benefit, and a predominantly fee-for-service payment mechanism.[1] Thus, we do not believe that better lists are likely to be associated with decreased low-value services or reduced costs of medical care.

Prior successful strategies to reduce low-value care have used a combination of clinician education with clinical decision support or clinician feedback.[13] A randomized clinical trial of changes to the electronic health record system to withdraw low-value tests from the quick shortcut ordering menu and adding US Preventive Services Task Force grading recommendations for testing at the point of care showed substantial reduction in unnecessary ordering practices.[14] Interdisciplinary team education and feedback for ordering clinicians have also been shown to have sustained associations with reducing preoperative testing before cataract surgery.[15] Investigation of wide-scale integration and evaluation of such efforts is needed at health system levels.

Unfortunately, the roles of education, clinical decision support, audits, and feedback are typically modest.[12] We believe that it is time for more robust approaches to limit low-value care, including changes in payment structures and incentives. For instance, elimination of reimbursement for low-value routine vitamin D testing in Ontario, Canada, led to a 92.7% relative reduction in screening tests.[16] Limiting reimbursement for low-value medical care will depend on the ability to clearly identify inappropriate care, which can be difficult, especially when attempting to use administrative data to evaluate complex care. Better approaches to accurately identifying inappropriate care are urgently needed, as well as changes in the culture that embraces such care.

The enthusiasm of health systems for reducing low-value care is limited by the lack of regulatory oversight and financial compensation for such efforts. Almost all quality measures currently reward health systems for providing more care, not for limiting low-value care. We believe that organizations, such as the Joint Commission and the US Centers for Medicare & Medicaid Services, should include quality measures that incentivize health systems to reduce low-value care services. Health systems also have little motivation to limit low-value care because it is typically compensated by private and governmental insurance in a fee-for-service system. Moving from fee-for-service to value-based care and accountable care structures might help address financial incentives, but will likely not be sufficient in isolation, as illustrated by the similar level of use of low-value care in Medicare and Medicare Advantage populations, which have an accountable care structure of payment.[17] Furthermore, low-value testing was performed on 5% to 21% of veterans in a study of the Veterans Health Administration, a single-payer, integrated health system with a utilization management infrastructure.[18] Taken together, these studies signal a need for interventions at multiple levels given the deeply imbedded societal and professional culture of more care.

The provision of low-value care is common among all physicians. In one study of more than 3 million patients cared for by more than 41 000 physicians, low-value services were provided to 33% of patients annually.[19] There was wide variation in the rates of low-value care provided by different physicians, even within the same health system. This variation was not explained by easily measurable characteristics, such as age, sex, years of experience, academic degree, or panel size. Many factors contribute to the provision of low-value care, including time constraints, patient requests, fear of malpractice, and cultural and professional norms. There is also evidence that most physicians tend to underestimate harms and overestimate the benefits of care.[20]

So how can we educate physicians to stop ordering low-value services? In 2015, the Alliance for Academic Internal Medicine, ABIM, and American College of Physicians (ACP) made a commitment to educate undergraduate and postgraduate physicians in high-value care,[21] with subsequent provision of educational tools, such as ACP's High Value Care curriculum for residents.[22] Focus on the harms of medical overuse and strategies for deimplementation of low-value practices should be an essential component of this curriculum and evaluated on ABIM certification examinations as a core competency.

After a decade primarily dedicated to describing the prevalence and harms associated with medical overuse, we believe the time is now to focus on multipronged interventions and implementation strategies for value-based care at the policy, structural, and education levels. Audits, feedback, and clinical decision support may be helpful, but we also believe that health systems should make it difficult for physicians to provide low-value care by removing low-value tests from order panels, requiring justification for low-value tests and procedures, and providing financial incentives for physicians who provide high-value care.

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