

## VIEWPOINT

## Reducing Low-Value Care and Improving Health Care Value

**Allison H. Oakes, PhD**  
Center for Health Equity Research and Promotion, Veterans Affairs Pittsburgh Healthcare System, Pittsburgh, Pennsylvania.

**Thomas R. Radomski, MD, MS**  
Center for Health Equity Research and Promotion, Veterans Affairs Pittsburgh Healthcare System, Pittsburgh, Pennsylvania; and Division of General Internal Medicine, Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania.

**Low-value care**, defined as the use of a health service for which the harms or costs outweigh the benefits, is a pervasive and enduring problem in the US. Enacting policies that limit reimbursement for low-value services is an important step in mitigating such care. For example, Powers et al<sup>1</sup> proposed a framework to identify and prioritize policies to govern the de-adoption of low-value care focused on evidence, eminence, and economics. However, transitioning to a state of health care delivery that prioritizes value over volume will require balancing “top-down” policy prescriptions with a “bottom-up” approach geared toward affecting local cultural change. Such an approach involves implementing de-adoption strategies tailored to address the behavioral and organizational factors that drive the provision of low-value care within a local health care ecosystem, whether it is an individual practice or a tertiary referral center.

Low-value care is commonly attributed to fee-for-service (FFS) payment, which rewards clinicians and health systems for delivering more, but not better, care. However, some research has challenged this perception by demonstrating that overuse exists in non-FFS health care systems and across insurance types, regardless of reimbursement or insurance benefit structure. For example, in a study based on the globally budgeted health system of Alberta, Canada, conducted from 2012 to 2015, 30% of 194 068 beneficiaries older than 75 years received at least 1 of 10 low-value services, such as unnecessary cervical cancer screening or carotid artery imaging.<sup>2</sup> Similarly, in the state of Maryland, a shift to hospital global budgets in 2014 was not associated with a reduction in systemic overuse, as measured by an index of 19 diverse services.<sup>3</sup> Within the Veterans Health Administration, a non-FFS integrated system that also insulates physicians from malpractice claims, 5% (2583 of 52 889) to 21% (4998 of 22 3776) of veterans underwent low-value diagnostic testing for several common medical problems, such as imaging for nonspecific low back pain and imaging for uncomplicated headaches or syncope.<sup>4</sup> The provision of low-value care when financial incentives are not present suggests that there are other motivating forces that contribute to overuse, driven by a deep-seated perception held by both clinicians and patients that more is better.

Health service overuse does not just manifest in the provision of discrete low-value tests and procedures, but also as a latent tendency across regions and health systems. Through the development and validation of the Johns Hopkins Overuse Index, Segal et al<sup>5</sup> characterized regional variation in the overarching provision of low-value services across 13 diagnostic tests, 2 tests for screening, 1 test for disease monitoring, and 4 procedures. Importantly, regional variation in systemic overuse persisted over time, suggesting it was related to systematic differences in care delivery. Moreover, evidence

about physician behavior within vs across different physician groups suggests that organizational culture influences patterns of low-value service use.<sup>6</sup> Individual organizations have distinct overuse profiles, with substantial performance variations that are persistent over time and are consistent across different types of low-value services. Such well-documented regional and facility-level variation in health service overuse further demonstrates the importance of local cultural and organizational drivers of overuse that are independent of economic forces. Efforts to move away from a culture in which low-value care is a default practice will require health systems and payers to promote organizational behavior change, beginning with purposeful measurement of low-value service use and culminating in the implementation of policies and interventions tailored to the unique factors that drive low-value care in local practices and health care systems. Such de-adoption approaches should consider the following 4 components.

First, health systems and payers need validated and readily applicable approaches to measure low-value care across the spectrum of health services. The direct measurement of low-value care requires researchers to isolate and count episodes of care in which patients received a test or treatment that was contrary to published recommendations. The literature includes many fully specified low-value care measures that use administrative claims to identify the use of low-value services across several care domains, such as cancer screening, imaging, diagnostic testing, and surgery. Applying such measures may provide health systems and payers with actionable results. For example, overuse measures may be applied to understand existing patterns of low-value care delivery at the practice, medical center, health system, or regional levels. Such data may then be used as a benchmark to monitor the effectiveness of subsequent approaches to reduce the provision of low-value care. Although claims-based metrics are ubiquitous and may be readily applied, they often lack the granular detail needed to identify a low-value service in diverse clinical contexts. Additional efforts to validate existing metrics for claims-based low-value care and develop new metrics that integrate electronic health record data will be critical to refine the detection of low-value care.

Second, health systems and payers require a roadmap to guide de-adoption efforts and develop embedded research agendas in which the measurement of low-value care becomes a standard component of quality measurement. To date, most quality improvement initiatives and pay-for-performance programs have focused almost exclusively on the underuse of indicated services. Mitigating low-value care could safely reduce spending, allowing for the re-allocation of limited resources toward services that maximize population health. At a local level, what low-value services are most

**Corresponding Author:** Thomas R. Radomski, MD, MS, 3609 Forbes Ave, Second Floor, Pittsburgh, PA 15213 (radomskitr@upmc.edu).

prevalent, costly, or harmful? Among those services, how would local health system leaders and clinicians prioritize their elimination? What outcomes should be assessed to determine whether low-value care has been successfully reduced? Different answers to these questions would necessitate a variety of approaches to reduce low-value care. However, because no single intervention is likely to be sufficient, purposeful experimentation is the only way to determine the extent to which different strategies can be combined to increase high-value care and decrease low-value care.

Third, policies and interventions intended to mitigate the delivery of low-value care must align with the motivations of patients and clinicians at the time a health service is ordered. Interventions that narrowly focus on the economics or the financial waste that is created by low-value care ignores potential psychological concerns and physical harms that these services may cause. These harms can occur from the overuse event (eg, a complication from a low-value screening colonoscopy in a patient older than 85 years), as well as from the cascade of services that might ensue (eg, additional tests and treatments following a low-value preoperative electrocardiogram for patients undergoing cataract surgery). Economic approaches to decrease low-value care may lead clinicians and patients to conflate de-adoption efforts with rationing and may help to explain the limited influence of existing price transparency interventions. Such approaches also overlook the low-cost high-volume health services that contribute the most to unnecessary spending.<sup>7</sup> Rather than focusing on the financial costs, which are often opaque, purposeful attention to the tangible harms associated with overuse may increase patient, clinician, and health system buy-in to reduce low-value care.

Fourth, a bottom-up approach to targeting low-value care necessitates the development of new interventions that focus on

shared heuristics, cognitive biases, and attitudes. For example, poor numeracy and framing could lead physicians and patients to systematically overestimate potential benefits and underestimate potential harms of low-value services. Moreover, a general discomfort with uncertainty combined with loss aversion can drive overuse, because physicians and patients may perceive that it is better to do something rather than nothing. These examples highlight implicit cognitive errors rather than extrinsically motivated overuse decisions. Fortunately, the very cognitive biases that may drive low-value care can be used to counteract provision of this care. Because medical decision-making increasingly occurs in digital environments, leveraging the electronic health record in a way that is acceptable to clinicians may form the basis of behaviorally informed interventions that may help to combat the compulsion to "do more." Such interventions might include default options, accountable justification alerts, or peer comparison. For example, a randomized clinical trial demonstrated that a purposefully designed default option reduced unnecessary daily imaging during palliative radiotherapy by more than half.<sup>8</sup>

Although it makes sense to move away from FFS medicine via top-down payment reforms, bottom-up local initiatives may be equally important to address the behavioral drivers of low-value care. Key to these efforts will be the reliable measurement of low-value care; incorporation of low-value care as a component of performance measurement; and the implementation of interventions that align with the motivations of patients, clinicians, and health care organizations. When top-down initiatives are met with an equally robust bottom-up response, the US health care system will be well-positioned to reduce low-value care and make considerable strides in improving health care value.

#### ARTICLE INFORMATION

**Published Online:** April 8, 2021.  
doi:10.1001/jama.2021.3308

**Conflict of Interest Disclosures:** Dr Oakes reported receiving grants from the Department of Veterans Affairs Health Services Research & Development. Dr Radomski is supported by research grants from the National Institutes of Health and the US Department of Veterans Affairs.

**Disclaimer:** The contents do not represent the views of the US Department of Veterans Affairs or the US government.

#### REFERENCES

1. Powers BW, Jain SH, Shrank WH. De-adopting low-value care: vidence, eminence, and economics. *JAMA*. 2020;324(16):1603-1604. doi:10.1001/jama.2020.17534

2. McAlister FA, Lin M, Bakal J, Dean S. Frequency of low-value care in Alberta, Canada: a retrospective cohort study. *BMJ Qual Saf*. 2018;27(5):340-346. doi:10.1136/bmjqs-2017-006778

3. Oakes AH, Sen AP, Segal JB. The impact of global budget payment reform on systemic overuse in Maryland. *Healthc (Amst)*. 2020;8(4):100475. doi:10.1016/j.hjdsi.2020.100475

4. Radomski TR, Feldman R, Huang Y, et al. Evaluation of low-value diagnostic testing for 4 common conditions in the Veterans Health Administration. *JAMA Netw Open*. 2020;3(9):e2016445. doi:10.1001/jamanetworkopen.2020.16445

5. Segal JB, Nassery N, Chang HY, Chang E, Chan K, Bridges JF. An index for measuring overuse of health care resources with Medicare claims. *Med Care*. 2015;53(3):230-236. doi:10.1097/MLR.000000000000304

6. Schwartz AL, Zaslavsky AM, Landon BE, Chernew ME, McWilliams JM. Low-value service use in provider organizations. *Health Serv Res*. 2018;53(1):87-119. doi:10.1111/1475-6773.12597

7. Mafi JN, Russell K, Bortz BA, Dachary M, Hazel WA Jr, Fendrick AM. Low-cost, high-volume health services contribute the most to unnecessary health spending. *Health Aff (Millwood)*. 2017;36(10):1701-1704. doi:10.1377/hlthaff.2017.0385

8. Sharma S, Guttman D, Small DS, et al. Effect of introducing a default order in the electronic medical record on unnecessary daily imaging during palliative radiotherapy for adults with cancer: a stepped-wedge cluster randomized clinical trial. *JAMA Oncol*. 2019;5(8):1220-1222. doi:10.1001/jamaoncol.2019.1432