

Low-Value Care: A Multilayer Problem Requiring Multilayer Solutions

Low-value care (LVC)—services that provide little to no benefit relative to potential cost and harm—is estimated to account for 10% of wasteful health care spending and 2% of all health care spending, or \$76 billion to \$101 billion per year (1). We know that LVC is a persistent and pervasive problem, thanks to the growing sophistication of LVC measurement over the past decade. In particular, the Choosing Wisely campaign by the American Board of Internal Medicine Foundation facilitated the creation of algorithms to measure “services patients and physicians should question.” Some proportion of discretionary services were previously assumed to be of low value, such as intensive care unit care, advanced imaging, and follow-up visits; with the advent of Choosing Wisely, we and other researchers have been able to code necessary exceptions and exclusions to measure LVC in claims and electronic health record data. In more recent years, we have also addressed the limitation that these measures are an underestimate of the underlying inefficiency in the health care system. In addition to the direct harms of these low-value services (such as lost time, out-of-pocket costs, radiation, antibiotic resistance, drug interactions, and psychological ramifications) (2), each service has the potential to cascade into additional downstream services of uncertain value and harms of their own (3).

In this context, the article by Dindinger-Hill and colleagues (4) is the latest in a growing literature that explores influences on LVC use. The authors studied 2 services that can have low value—prostate-specific antigen (PSA) testing and mammography—in fee-for-service Medicare beneficiaries aged 75 years or older (4). Since 2008, the U.S. Preventive Services Task Force has consistently recommended against PSA screening for men aged 75 years or older (D grade). In December 2009, it changed its B grade for screening mammography in women aged 75 years or older to a mark of insufficient evidence. Using Medicare claims data from 2008 through 2018 for matched physician and patient groups, Dindinger-Hill and colleagues compared physicians who moved from areas of higher use of these low-value cancer screening tests to areas of lower use versus those who stayed in higher-use areas; they also compared physicians who moved from areas of lower use to areas of higher use versus those who stayed in lower-use areas. They found that a physician’s new clinical setting (defined as a health service area, or referral region for a local hospital) did not drive low-value mammography or PSA testing in the first 3 years after the move. Specifically, physicians moving to areas with higher rates of low-value screening did not provide these tests at a

higher rate than the market from which they relocated. Physicians who initially practiced in areas with high rates and relocated to areas with low rates did provide less low-value screening than physicians who stayed.

These results should be understood in the context of a few limitations. First, because the authors calculated regional LVC rates as number of visits with low-value services divided by all visits, areas in which physicians provide more frequent visits or care is fragmented across many physicians will seem to offer less LVC by virtue of a larger denominator, despite having the same rate of LVC per patient. Second, because the authors compared physicians who moved versus those who stayed, the differences they report may be explained not by the effect of the environment but instead by practice changes inherent in a move. One might conclude from the results that good habits stick, whereas bad habits can be reversed—but the results could instead mean that moving is associated with fewer opportunities to offer low-value services. Finally, they matched on a relatively limited set of covariates, so results may be confounded by unobserved physician characteristics (for example, that differ by moving status) or by area-level characteristics that influence screening behavior.

As this study suggests, use of LVC and solutions to mitigate it require understanding the roles of areas, health systems, clinicians, and patients in LVC decisions. Factors related to the U.S. health care system (fee-for-service payment, fear of malpractice litigation, prevalence of medical advertising, and lack of time to explain alternatives), knowledge, and social factors (culture of health care consumption) all play a role (5). Integrated delivery systems—where a growing share of Americans get their care—influence LVC through hiring decisions, clinical workflows (like automatically scheduling women for annual mammography), and internal payment structures (6). Clinicians have enormous influence, which may vary by factors like risk aversion, tolerance for uncertainty, training, recency of training, and ownership of imaging equipment. Patients bring their own perspectives shaped by their preferences and experiences.

The study focuses on 2 low-value cancer screening tests that are commonly used and that illustrate the complexity of decision making and solutions. Prior research has shown that having a primary care physician, White race, greater education, and greater income are associated with higher rates of inappropriate PSA screening (7). In addition, patients whose physicians ordered more services in general at their visit were more likely to receive a low-value PSA test.

Stopping screening for prostate cancer is difficult because these tests are easily accessible, cheap, and reassuring to patients (until they are not). Low-value mammography is common for several reasons. Breast cancer awareness campaigns are pervasive and effective. Appropriately, we have worked to *lower* the barriers to mammography, including not requiring a referral for the service, such that breast imaging clinics often reach out to patients directly to schedule. For both tests, discontinuation at 75 years requires difficult conversations about aging and mortality.

In light of the complex interplay of these layers of decision making, many potential levers to reduce LVC have not been successful, and the greatest successes have been found in multicomponent interventions that face both patients (demand) and clinicians (supply) (8). For example, the province of Ontario eliminated reimbursement for low-value vitamin D testing, and use decreased by 93% (9). Health systems have also had success implementing interventions to reduce antibiotic prescribing and low-value vitamin D testing, such as clinical decision support and changes to order sets. For PSA testing and mammography, tools to help shared decision-making conversations, such as decision aids, may help (10).

Low-value care gained attention quickly in research and policy circles alongside Choosing Wisely and related initiatives. Rightly so: If there are ways to both reduce spending and improve quality of care and patient experience, they should be quickly adopted. This article shows what might happen when physicians assimilate in a new environment and reminds us of the complex interplay among system, clinician, and patient factors in LVC use and solutions.

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Disclosures: Disclosures can be viewed at www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum=M24-0862.

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Ann Intern Med. doi:10.7326/M24-0862

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