In this issue of the Journal, Trivedi and colleagues examine the effect of cost sharing on the use of screening mammography among women enrolled in Medicare managed-care plans from 2001 to 2004. Focusing on more than 350,000 women between the ages of 65 and 69 years, the authors show that cost sharing — either in the form of copayments (in which patients pay flat fees when they receive services) or coinsurance (in which patients pay a fixed percentage of the cost of those services) — reduces the number of women who undergo mammography. The effects are large relative to the modest cost burdens the plans impose. The authors estimate that cost sharing on the order of $10 to $20 reduces by 8% the proportion of women who undergo mammography.

Their findings are robust, with similar findings in unadjusted analyses and in multivariable analyses adjusted for potential demographic and regional confounders. Likewise, they are consistent between their cross-sectional comparisons (i.e., between plans) and longitudinal comparisons (i.e., the change over time within a plan before and after cost sharing was instituted). Their findings are also broadly consistent with other analyses of cost sharing for cancer screening.

The authors conclude that cost sharing should be waived for mammography, essentially because mammography is beneficial, and therefore reducing its use by imposing out-of-pocket costs is against the interest of public health.

Their conclusion raises a challenging health policy question: How, if at all, should cost sharing be incorporated into the design of health insurance? Specifically, what is the best way to structure financial incentives so that patients use health care services wisely but not excessively — or, in colloquial terms, what kind of “skin in the game” best serves the interest of patients within the fiscal constraints of the health care system?

At the extremes, approaches to cost sharing differ in many respects. At one end are high-deductible plans that are linked to savings accounts, such as health savings accounts. In these plans, patients are placed in the same position as consumers of other goods or services. The expectation that patients will consume health care services wisely and sparingly because they are using their own money, rather than funds from insurers or taxpayers, is a key assumption of high-deductible plans. Other anticipated benefits are that patients will take more responsibility for their own health and will seek high-quality and efficient providers, in both cases because they will save money by doing so.

At the other end of the spectrum is “value-based insurance” design, in which third-party insurers use cost sharing to induce patients to seek higher-value services in preference to lower-value services. To encourage the use of beneficial services, insurers lower cost sharing. Conversely, insurers increase cost sharing when they want to discourage the use of undesirable services or those that provide little benefit. For instance, the proposal to eliminate copayments for angiotensin-converting-enzyme inhibitors for Medicare patients with diabetes is a “value-based” proposition. A recent study showed that when copayments are waived, adherence increases, resulting in both reduced total costs for diabetes care and improved diabetes outcomes.

As Trivedi and colleagues suggest, their findings motivate a “value-based” conclusion: that cost sharing should be waived for mammography for Medicare enrollees. Moreover, their analysis tests a fundamental presumption of the high-deductible movement — that a knowledgeable consumer will make wise decisions when purchasing health care services. Their study
serves as a test of this presumption because in mammography we find all the elements that a “knowledgeable consumer” should require to make a wise decision in purchasing health care. A knowledgeable consumer should know the benefits and risks of services: in surveys of women, nearly all know about mammography, and many women actually overestimate the extent to which it is beneficial. A knowledgeable consumer should be able to judge whether services are of sufficient quality: in mammography, quality is ensured through a two-part system that is vastly more thorough than that offered by most health care services, a result of both the Mammography Quality Standards Act and facility accreditation by professional societies. A knowledgeable consumer would opt for services that deliver value for a dollar: in the plans studied by Trivedi et al., mammography was a good value, with a meaningful gain in life expectancy available at a cost to patients of only $10 to $20 per mammogram.

Yet, in the example of mammography (in which there is clarity regarding benefits, quality assurance, and an extraordinarily attractive value proposition), the findings suggest that the introduction of a small out-of-pocket expense led 8% of consumers to opt out of mammography — a decision that, on average, was not in the best interest of their health. This finding bodes poorly for the high-deductible movement, since one would expect that patients would make suboptimal decisions even more often in cases in which the health care service is more expensive, has received less publicity, has less rigorous quality control, or is more unpleasant or risky.

So, if high-deductible health insurance plans have the potential to harm health by inducing consumers to make poor health care choices, is value-based insurance design the solution? Financial incentives, in the form of lower prices, should steer patients to obtain the services that deliver more health gains and to seek care from the providers who provide the highest quality and most efficient services. But open questions remain, including the daunting question of whether third-party payers can reliably and reproducibly determine which services are of higher value and which providers can deliver particular services with high quality and efficiency. In this area of public health, there are not many shortcuts.

We should not assume automatically that the findings of Trivedi et al. should be extended to all other screening tests. Many tests have uncertain benefits, including the assay of prostate-specific antigen (PSA) for prostate-cancer screening and cardiac computed tomography for asymptomatic persons at risk for coronary artery disease. On the other hand, many costly and risky interventions produce benefits in a cost-effective way, such as implantable cardioverter–defibrillators (ICDs) for the prevention of sudden death from cardiovascular causes in persons with severe heart disease. As such, a truly value-based insurance policy would encourage the appropriate patient to receive an ICD, even though it costs the insurer tens of thousands of dollars, while discouraging the use of a PSA test, even though it costs only a few dollars. On both ends, insurers and patients may find such paradoxes inscrutable.

There are other challenges, too. Many services vary greatly in their effectiveness on the basis of the subcategories of patients who receive them. For instance, the same expensive chemotherapy regimens can provide far greater life prolongation when given in the adjuvant setting than when given for metastatic disease and also vary in effectiveness according to the type of cancer. To offer various cost-sharing arrangements for the same chemotherapy regimens on the basis of individual factors of patients seems administratively complex. One also worries about provoking the ire of patients with cancer and their families when they learn that complex arrays of financial inducements are tied to vexing personal decisions.

These challenges will be substantive for insurers who pursue value-based health insurance design. Yet, the analysis by Trivedi et al. emphasizes the importance of doing just that, since it reminds us that the primary objective of giving patients “skin in the game” is to enhance their health.

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