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Assessing Value in Health Care Programs

Abstract

Many health care services provided in the United States are of low value, meaning that the cost of providing those services is high relative to the health care benefit they confer. In some cases, the care provided may have no value or even, on average, may be harmful. Examples of low- or negative-value services include unnecessary surgery or diagnostic imaging that will not change management. Given estimates that 30% of the \$2.5 trillion the United States spends on health care services each year may provide little benefit,¹ there is a widespread eagerness to enhance the ratio of benefits to costs.

Disciplines

Health and Medical Administration

Assessing Value in Health Care Programs

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MANY HEALTH CARE SERVICES PROVIDED IN THE United States are of low value, meaning that the cost of providing those services is high relative to the health care benefit they confer. In some cases, the care provided may have no value or even, on average, may be harmful. Examples of low- or negative-value services include unnecessary surgery or diagnostic imaging that will not change management. Given estimates that 30% of the \$2.5 trillion the United States spends on health care services each year may provide little benefit,¹ there is a widespread eagerness to enhance the ratio of benefits to costs.

Because value matters in health care, when new health care programs are proposed it has become common to ask, “What is the return on investment from implementing this new program?” Implicit in this question is that programs should be supported if they save money but not otherwise. Positive return on investment, meaning that more money is saved than is spent, has become the standard by which new initiatives are evaluated. This standard has been used to evaluate new programs such as the primary care medical home, disease management, and the projects submitted for the new Center for Medicare & Medicaid Services Innovation Challenge.

Although asking about return on investment might seem to make sense given concerns about health care cost and value, asking about return on investment is the wrong question when assessing whether a health care program is successful. What would happen if the rule were applied to every health care decision that is made? Besides childhood vaccination and flu shots for the elderly, few health care services save money.² The positive return-on-investment criterion is not applied to most health care services because almost nothing satisfies it. Medicare is prohibited by law from considering cost in coverage decisions, and other insurers tend to follow suit, even if the benefits are small and the costs very large. Would anyone ever ask, “What is the return on investment in treatment of this patient’s cancer?” This is not a meaningless question, but almost certainly one that most people would think inappropriate to ask.

Cost is important and should be considered in many more settings for both existing and new services. Clinicians and policy makers should not apply one standard when tacitly continuing the status quo and a different standard when evaluating innovative programs that might be implemented. It certainly does not make sense to use one criterion—Are there clinical benefits?—for coverage decisions for treatments and a different criterion—Are health care savings greater than program costs?—for preventive services or for delivery system innovations designed to improve health. Programs designed to improve health and prevent disease should be evaluated based on whether they improve health at a reasonable price, essentially comparing whether improvements in health are achieved for less resources than through alternatives, eg, expenditures on health care services.

Health care reimbursement tends to be disease fixated and should be evaluated the same way based on the value of expenditures in achieving improvements in health.³ If an employer spends \$100 000 treating late-stage emphysema or lung cancer for its employees—an expenditure with a negative return on investment but one that adds value to employees’ lives—should that employer be willing to spend money on smoking cessation programs? The answer is almost undoubtedly yes. However, if health promotion programs or health system delivery innovations are required to save money, they will likely be labeled failures even if they improve health at a lower price than many of the services that we now willingly pay for under Medicare and private insurance. If we continue with the approach of insisting on a positive return on investment to fund such programs, low-value spending will persist at higher rates than would otherwise be the case.

For example, consider a program that would improve medication adherence after acute myocardial infarction (AMI). Adherence rates to β -blockers, statins, angiotensin-

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converting enzyme inhibitors or angiotensin-receptor blockers after an AMI event is poor; a recent large-scale study showed that even when copayments were lowered to \$0 among insured patients, average adherence for these medications was only about 45%.⁴ If a new program could increase adherence to 70%, it is plausible that the program could significantly reduce the rate of hospital admissions for MI, stroke, and revascularization procedures. If the average cost of health events requiring hospitalization in the 12 months following a hospital admission for a new MI is about \$20 000 and the new program reduced the rate of events requiring hospitalization by 10%, the new program could cost up to \$2000 per year and still save money. Does that mean the program should not be adopted if it costs \$3000? At that point, the calculated return on investment for the program is negative because it costs more than it saves. But wouldn't this program still be a much better use of money than letting those MIs occur (mortality rates from AMI are typically more than 10% among hospitalized patients in the 30 days after admission, and many patients die before making it to a hospital)? If this is deemed not a good use of resources, then why are so many other services covered that yield lower value?⁵ Many insurers, including Medicare, are continuing to cover bevacizumab for metastatic breast cancer, despite the unanimous recommendation by a US Food and Drug Administration panel that it not be covered because it is not helping patients to live longer, does not control their tumors, and exposes them to serious adverse effects⁶ and despite an average annual cost of \$99 000.⁷

There are political, ethical, and emotional challenges to making explicit resource allocation issues in treating diseases and applying the same metrics used to evaluate the effectiveness of programs that prevent diseases in largely unidentified patients. It is always more difficult to shut down existing programs than to say no to new ones, a phenomenon related to inertia, also known as status quo bias.⁸ It is also more difficult to justify investments in prevention across broad populations than investments in the treatment of identifiable patients, a phenomenon known as the rule of rescue.⁹ Changing the criteria used to evaluate health system delivery innovations might help overcome these tendencies. Evaluating success using the

same criteria—whether a preventive service, delivery system innovation, or treatment—may be the best way to ensure the maximal value in terms of improvements in health for the resources expended on health care services.

A recent conversation with a benefits manager from a medium-sized employer brought this point home. She reported that when asked by the chief financial officer, “What is the return on investment in putting in place this \$125 000 wellness program?” she responded, “What is the return on investment on the \$28 million we are spending on treating disease through our health benefits?” If cost is not considered when thinking about the value of covered treatments, it does not make sense to use positive return on investment as a criterion for determining whether promising new delivery system innovations should be covered. A better approach would be to adopt similar metrics for treatment and prevention for current and proposed care, for which the goal in all cases is achieving the most improvement possible with the resources available.

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