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## Insights

## Responding to Health-Improving but Cost-Ineffective Care

Ankur Pandya, PhD; Susan Griffin, PhD; Simon Walker, MSc, MA

Wasteful health care spending can take different forms, including spending on services that increase costs while providing no health benefits or harming health ([no-value care](#)), or spending on services that improve health but are deemed cost-ineffective according to willingness-to-pay for health ([low-value care](#)). The policy objective for no-value care is simple: reduce the quantity of such health services delivered. Low-value care, while improving the health of those receiving it, reduces the benefits of health care spending to below what is achievable through other investments. Here, we suggest 5 questions health policy makers should ask about health-improving but cost-ineffective (ie, low-value) care and outline a theory-based approach to finding the answers.

Author affiliations and article information are listed at the end of this article.

### Question 1: Are We Sure It Is Low Value (Cost Ineffective)?

An incremental cost-effectiveness ratio (ICER) greater than \$100,000 to 150,000 per quality-adjusted life-year (QALY) may suggest low-value care in the US, but an ICER is only as robust as the analysis and the underlying evidence base that produced it. When we are not sure about the cost effectiveness of a potentially low-value service, one policy response could be to commission new research that addresses the sources of uncertainty, whether that research focuses on the underlying inputs for an existing analysis versus an entirely new (more rigorous) cost-effectiveness study. The value of this new research will depend on the magnitude of the uncertainty around the existing cost-effectiveness evidence, the probability that the service delivery will change based on new information, and the population-level effects of the decision on health and costs.<sup>1</sup>

### Question 2: Do Ethical Arguments Outweigh Cost Effectiveness?

Once the cost-ineffectiveness of a given service is established, the focus should turn to whether ethical issues motivate its use. There are defensible ethical principles (such as nonmaleficence,<sup>2</sup> [disease severity](#), or concerns over [disparities](#)) that policy makers could integrate with cost-effectiveness evidence in the overall decision process. When data are available, methods that [quantitatively trade off](#) cost-effectiveness considerations against distributional concerns—or at least clearly [display these tradeoffs](#)—should be used. This approach would acknowledge any reduction in population-level QALYs gained (under a constrained budget) or increases in total health spending that result from deviating from cost-effectiveness recommendations.

### Question 3: What Do We Gain by Challenging This Low-Value Service?

Effective responses to low-value care will require investments of time, energy, resources, and political capital. Decision makers, whether they are writing clinical guidelines, developing quality measures, or negotiating payments for health services, do not have the capacity to address all instances of low-value care. Formal methods of implementation science should be used to prioritize which low-value services to respond to and which to monitor for future action.<sup>3</sup> For example, Meltzer and Chung showed how the value of perfect implementation of quality measures depends not only on their ICERs but also their level of usage (ie, current implementation and condition prevalence).<sup>4</sup> The costs of implementing a policy response to low-value care (eg, education initiatives, audit and

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feedback policies, and price negotiations) should be weighed against the benefits of the policy actions to determine the overall value of intervening compared with the status quo.

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#### Question 4: Can We Lower the Price?

Low-value care can be converted to high-value care if the price of the service is sufficiently lowered. To do this, health policy makers must have the ability to negotiate (ie, the ability to say no to reimbursing health-improving but cost-ineffective health services). Price changes could be achieved through demand-side (eg, [value-based insurance design](#) or [reference pricing](#)) or supply-side (eg, [global budgets](#)) policies that discourage investment in cost-ineffective services.

If high prices are a primary driver of inefficient US health care spending,<sup>5</sup> care should be taken that policy responses aimed at price reductions are directed toward health-improving but cost-ineffective (ie, low-value) services and not at high-priced services that are [nonetheless cost-effective](#) because they confer large health gains. Cost-effectiveness analysis can identify the low-value services for which high prices should be reduced, and by how much.

Some early adopters have changed policy in the US along these lines, but progress is slow. The American College of Cardiology and American Heart Association issued a policy statement in 2014 stating that they would define value using cost-effectiveness,<sup>6</sup> and the Institute for Clinical and Economic Review's [cost-effectiveness analysis of PCSK9 inhibitor therapy](#) (for high cholesterol) may have influenced [price negotiations](#) that shifted its price from more than \$14 000 per year to \$2300 to \$3400 per year. Health policies in the US have made fewer strides in linking cost-effectiveness to value for other health conditions, such as for [cancer treatment pricing](#).

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#### Question 5: If We Cannot Lower the Price, Can We Lower the Quantity?

Policy levers that lower prices can also reduce the quantity of low-value care delivered. Refusing to pay for low-value health services in negotiations will reduce the quantity of such services. Reporting ICERs may directly inform "yes" or "no" funding decisions for a single payer, such as the National Health Service in the UK; but in fragmented health care systems, such as the US, cost-effectiveness analysis may be better suited to inform incentives-based policies, in which cost-effective behaviors should be incentivized and cost-ineffective behaviors should be discouraged. Changing behavior is difficult, however, and as individuals can expect to see their own health improve from using low-value care, these challenges may be heightened.<sup>7</sup>

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#### Summary

Rationing in health care is inevitable, and cost-effectiveness information offers a quantitative signal as to which health services should be provided at their current prices and which services do not show commensurate health gains given their costs. A key feature of our framework is that reducing the quantity of health-improving but cost-ineffective care is the final question asked in the process. A single study reporting a high ICER may not be sufficient evidence that a service should be de-adopted. Potential [ethical issues with the QALY](#) should not warrant [excluding the entire body](#) of cost-effectiveness evidence from health policy decision making in the US. Lowering prices, conducting new research, or paying for low-value services (if population-level outcomes are small or ethical considerations are significant) are all defensible potential outcomes of our framework. Withholding health-improving but cost-ineffective services is the last resort, but a necessary step, to get the most return from finite health care dollars.

## ARTICLE INFORMATION

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## REFERENCES

1. Claxton K. The irrelevance of inference: a decision-making approach to the stochastic evaluation of health care technologies. *J Health Econ*. 1999;18(3):341-364. doi:[10.1016/S0167-6296\(98\)00039-3](https://doi.org/10.1016/S0167-6296(98)00039-3)
2. Custer B, Busch MP, Marfin AA, Petersen LR. The cost-effectiveness of screening the US blood supply for West Nile virus. *Ann Intern Med*. 2005;143(7):486-492. doi:[10.7326/0003-4819-143-7-200510040-00007](https://doi.org/10.7326/0003-4819-143-7-200510040-00007)
3. Fenwick E, Claxton K, Sculpher M. The value of implementation and the value of information: combined and uneven development. *Med Decis Making*. 2008;28(1):21-32. doi:[10.1177/0272989X07308751](https://doi.org/10.1177/0272989X07308751)
4. Meltzer DO, Chung JW. The population value of quality indicator reporting: a framework for prioritizing health care performance measures. *Health Aff (Millwood)*. 2014;33(1):132-139. doi:[10.1377/hlthaff.2011.1283](https://doi.org/10.1377/hlthaff.2011.1283)
5. Papanicolaos I, Woskie LR, Jha AK. Health care spending in the United States and other high-income countries. *JAMA*. 2018;319(10):1024-1039. doi:[10.1001/jama.2018.1150](https://doi.org/10.1001/jama.2018.1150)
6. Anderson JL, Heidenreich PA, Barnett PG, et al; ACC/AHA Task Force on Performance Measures; ACC/AHA Task Force on Practice Guidelines. ACC/AHA statement on cost/value methodology in clinical practice guidelines and performance measures: a report of the American College of Cardiology/American Heart Association Task Force on Performance Measures and Task Force on Practice Guidelines. *Circulation*. 2014;129(22):2329-2345. doi:[10.1161/CIR.0000000000000042](https://doi.org/10.1161/CIR.0000000000000042)
7. Powers BW, Jain SH, Shrank WH. De-adopting low-value care: evidence, eminence, and economics. *JAMA*. 2020. doi:[10.1001/jama.2020.17534](https://doi.org/10.1001/jama.2020.17534)