

Challenges in Understanding Differences in Health Care Spending Between the United States and Other High-Income Countries

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In this issue of *JAMA*, Papanicolas and colleagues report an important set of findings that aim to inform a crucial debate: what drives differences in health care spending and what are



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the implications for policies aimed at controlling it?¹ The authors compared spending and various aspects of the US health care system with those in 7 European countries, Canada, Australia, and Japan and report that in 2016, health care spending in the United States accounted for 17.8% of gross domestic product and that annual per capita health care spending in the United States was nearly double that in the other countries (\$9403 in the United States vs a range of \$3377 to \$6808 in the other countries). However, decomposing differences in health care spending into price and quantity is more difficult than it might seem, and there are important challenges in drawing policy inferences from such analyses.

Previous studies have shown similar rates of health care use in the United States and in other nations and have concluded that the higher health care spending in the United States is therefore attributable to higher prices.² Similar studies have examined spending differences within the United States, and debate persists over alternative “price vs quantity” decompositions. Economics, however, demonstrates that without very specific data and additional information, it is very difficult to use these decompositions to inform public policy.

For example, individuals in the United States may consume what appear to be similar health care services, but some of these services may actually be more intensive versions of the services consumed in other countries. For instance, patients in the United States may see specialists just as often as patients in Australia but may be more likely to see board-certified radiation oncologists relative to general oncologists, receive new immunotherapies instead of an angiogenesis inhibitor, and receive drug-eluting stents instead of bare-metal stents. It is not possible to conclude that individuals in the United States pay higher prices for these services just by observing that they spend more but have the same number of visits for cancer care, receive different medications, or use the same number of stents without having granular data about the exact type of services and products being used. The larger and more varied the health care services being compared, the larger the scope of this problem.

A related issue that is crucial to making valid spending comparisons is the role of quality differences. Quality differences not only make cross-country comparisons difficult but these differences may complicate within-country comparisons. For example, a report from the Health Care Cost Institute concluded that pharmaceutical utilization stayed constant over the past 4 years (2012-2016) and that there was substantial price growth in this sector.³ Like other research, this analysis treated the introduction of new drugs, including therapies for hepatitis C, as a pure price increase without incorporating the possibility of any quality improvement represented by these innovations. Similar assumptions about quality improvements in hospital care can lead to an inaccurate conclusion about price increase for inpatient care, creating the perception of payers paying higher prices for existing products when, in practice, the product mix is changing at the same time. The absence of robust and truly comparable data on quality within and across countries makes it difficult to assess some of the root cause of differences in health care spending.

Moreover, even though quality is difficult to measure, that does not mean that differences in quality, or perceived quality, cannot be large enough to be a major driver of observed differences in prices. As evident from highly competitive industries such as digital technology, small differences in performance can command substantially higher prices.

But even if it is possible to measure quantity and quality well enough to make direct price comparisons for similar health care services, it is important to be careful about drawing inferences about market competition or policy prescriptions. Higher prices may point to lack of competition among health care organizations or clinicians, but there may be alternative explanations. For example, if physicians are paid more in the United States than in the United Kingdom, it might be because wages for all highly skilled occupations in the United States are higher than those in the United Kingdom, and offering to pay US physicians UK salaries would mean that there would be fewer physicians in the United States. To conclude that higher prices are driven by physicians’ market power, it is important to show the same physicians charging different prices to payers based on their relative bargaining positions or to observe higher prices in markets with fewer physicians and less competition. However, this type of evidence is difficult to glean from cross-country comparisons. Higher prices can also arise from demand-side factors such as more generous

insurance that covers every service, like proton therapy for prostate cancer, or greater income inequality (ie, richer patients are willing to pay more for intensive treatment).

The implications of policies aimed at reducing health care prices are profoundly different depending on how supply and demand interact to generate those prices. When prices for health care services change, quantity will change too because prices and quantities are intertwined. A supply-side policy that increases the number of competitors in a market or slows consolidation via anti-trust regulation would lower prices and increase quantities. Demand-side policies like promoting high-deductible health plans, narrow networks, or closed formularies would lower prices and lower quantities. Just observing health care prices and quantities cannot reveal which side(s) of the market should be addressed or whether an increase or decrease in quantities would be more desirable because the answer depends on whether there was overuse or underuse in the first place.

What ultimately matters in health care is the value of each additional dollar spent—how much do outcomes improve as more is spent? But the answer to this question also varies across countries because each nation may choose a different approach for converting more spending into better outcomes. Some nations may direct extra spending into health care coverage, others into public health and social services, and still others into high-cost medical technologies. Because of these decisions, some outcomes using high-cost technologies, such as rapidly performing percutaneous coronary interventions for patients with acute myocardial infarction or treating patients with metastatic breast cancer using advanced targeted therapy, may be better in the United States than other nations (because the United States has already acquired expertise in the use of these technologies). However, outcomes using low-cost approaches like medical management or prevention may be better in other countries than in the United States (because the United States has not developed a comprehensive system adept at these aspects of care). If the benefits of medical management are relatively lower in

the United States, encouraging the substitution of medical management for intensive treatment may not result in the same outcomes achieved in countries that specialize in medical management. This means that it is difficult to garner insights into how adopting approaches used in one country will affect spending and outcomes in another. There is perhaps more to be learned from comparisons within the United States than across countries, but even these comparisons are limited by delivery systems that have specialized differently in how to deliver care.^{4,5} These differences are compounded by the very different landscape for different payers; Medicare, for example, relies on administratively set prices not dictated by the local health care market power.

The article by Papanicolas et al represents an ambitious and comprehensive examination of comparative health care spending in the United States and other high-income countries, reconciling as best as possible some data sources that differ in important ways. These findings illustrate the rich differences among health care systems in prices, quantities, and intensity of services across these countries, providing insights into how the experience of patients may be in different countries. This report represents a major advance, and highlights to policy makers that the US system could provide better value to patients. However, actually designing the policy levers to improve the US system will not only require more data on quality but also will require knowing the underlying supply-side and demand-side drivers of prices, quantities, and quality. These answers are likely to vary by payer, by type of health care organization and practitioner, and by specific service. All of this points to the importance of within-United States comparisons beyond cross-country comparisons.

Data about the various dimensions of a health care system are important, but health care policy is as much about the values of voters as it is about prices and quantities. Economics cannot speak to the priorities of voters: even facing the same prices, people and policy makers in other high-income countries might make very different choices about prioritization for spending on health care services.

ARTICLE INFORMATION

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