Health Care Spending — A Giant Slain or Sleeping?

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The health care system is confronting a shocking surprise: slow growth in cost. According to U.S. government actuaries, real spending for health care increased a scant 0.8% per person in 2012, slightly less than the real gross domestic product (GDP) per capita. In contrast, since 1960, spending has increased an average of 2.3 percentage points more than GDP growth (Fig. 1). The yearly gap between increases in health spending and GDP growth explains why national health expenditures jumped from 5% of the GDP in 1960 to 18% in 2011.

The recent moderation in spending is good news for payers of the health care bill, but analysts are divided about what to make of it. On the one hand, some believe that the Great Recession of 2007–2009 and the nation’s very slow recovery can explain ebbing increases in health care costs. Writing recently in the Journal, Fuchs described how — with rare exceptions — trends in health spending have always tracked with trends in the general economy. The implication is that health care costs will probably surge as the economy recovers.

On the other hand, some analysts (including one of us) believe that the slowdown exceeds what trends in the GDP would predict and that the past may no longer be prologue. They theorize that public and private efforts to control health spending, including features of the Affordable Care Act (ACA), may finally be working.

The purpose of this report is to explore this debate about national health expenditures and to understand its implications. We start by reviewing historic trends in health care spending and efforts to control them. We then probe further the rationales for seeing the recent slowdown as either temporary or likely to endure. We conclude by discussing possible consequences and policy responses should either the optimistic or the pessimistic scenario prevail.

A central finding of our analysis is that, regardless of what happens to cost trends, current spending is far higher than needed, and it demands continued efforts at cost control, including implementation of new ACA provisions. In recent months, many independent groups have put forth cost-control ideas that build on the health

### Figure 1. Changes in the Real National Health Expenditure (NHE) and Gross Domestic Product (GDP) per Capita, 1961–2012.

<table>
<thead>
<tr>
<th>Period</th>
<th>NHE Change (%)</th>
<th>GDP Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970–1993</td>
<td>4.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>1993–1998</td>
<td>2.5%</td>
<td>2.6%</td>
</tr>
<tr>
<td>1998–2003</td>
<td>4.5%</td>
<td>1.8%</td>
</tr>
<tr>
<td>2003–2012</td>
<td>4.7%</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

Change in real NHE per capita

Change in real GDP per capita (5-year average)

Average Change in NHE 4.3%

Average Change in GDP 2.0%
reform law and suggest common strategies that should be pursued to improve efficiency in the health system.

## A Brief History of Health Care Spending

Growth in national spending for health care escalated rapidly after the enactment of Medicare and Medicaid in the 1960s, and it remained high in the 1970s and 1980s. Between 1970 and 1993, the real increase in health spending per person exceeded growth in the GDP per capita by 2.7% percentage points annually.

This increase hit the federal budget hard and prompted dramatic, repeated, bipartisan federal efforts to rein in costs. In 1971, Republican President Richard M. Nixon imposed federal wage and price controls on the U.S. economy, including the health sector. Health spending decreased in the short term, but prolonged wage and price controls were politically and economically unsustainable. Costs surged immediately after the government lifted controls in 1975.

President Jimmy Carter, a Democrat who succeeded Nixon, made controlling health costs one of his key domestic priorities. His first major health initiative was legislation to control hospital costs. To head Carter off, hospitals began a voluntary cost-containment effort that slowed cost increases briefly. This effort crumbled as soon as Congress defeated Carter’s bill.

In 1983, under Republican President Ronald Reagan, the federal government tried again to tamp down hospital expenses by introducing the now familiar diagnosis-related-group system. Although hospital costs decreased at first, spending in other areas accelerated, and real per capita increases in health costs averaged 5.5% in the 1980s.

After these failed governmental initiatives, the private sector stepped in. Following the demise of the health plan proposed by Democratic President Bill Clinton in 1994, employers and payers took a sharp turn toward managed care. Like some previous efforts, managed care achieved temporary success. Both absolute increases in health spending and the gap between health spending and GDP growth decreased significantly. However, with the backlash against managed care in the late 1990s, the effectiveness of many cost-containment provisions dwindled, and providers merged in part to gain negotiating leverage with managed-care organizations and to raise prices. Health care costs in the early 2000s resumed their relentless upward arc, though they began to moderate slightly toward the middle of the decade.

In contrast to this history, the experience of the past few years is particularly unusual. Economists typically explain growth in health spending with reference to growth rates in the current GDP and the GDP in the recent past. Adjusted for the effect of slower economic growth, increases in medical spending averaged almost a full percentage point less than would have been predicted in 2011 and 2012.

## Causes of Increases in Health Care Costs

A good deal of work has gone into understanding the growth in medical costs. There is, of course, general inflation, which raises the costs of wages, energy, and supplies. Economists typically exclude inflation from their analysis of spending and concentrate on the remainder of the influences.

In an analysis of inflation-adjusted (“real”) spending, the major factor in cost growth during the past 50 years has been the development and diffusion of new medical technology. The specific innovations have varied over time — from cardiac procedures to prescription drugs to advances in imaging — but the importance of technology as a whole has not. Estimates suggest that about half the annual increase in U.S. health care spending has resulted from new technology.

The role of technology itself partly reflects other underlying forces, including income and insurance. Richer countries can afford to devote more money to expensive innovations. Similarly, Medicare, Medicaid, and the tax subsidy for employer-provided health insurance have all been implicated in the increased use of medical resources.

In addition to the technological component, price changes have been an important factor in increased spending. Outside of Medicare and Medicaid, the U.S. government does not set or negotiate prices with providers. This contrasts with most other industrialized nations, where governments negotiate prices for the great bulk
of services received by their populations. The outcome of these private-sector price negotiations can thus influence overall spending. For example, the reduction in cost increases under managed care in the 1990s (Fig. 1) is generally attributed to the success of managed-care organizations in negotiating with providers or imposing price reductions on them. The particularly rapid increase in spending in the early 2000s is attributed to the demise of managed care and the ability of some providers to demand higher rates.\textsuperscript{18}

Changes in the health status of the population — for example, aging and trends in smoking and obesity — are frequently mentioned as causes of cost increases, but so far their effect has been modest.\textsuperscript{19} Aging has a much greater effect on the split between public and private spending than on total spending,\textsuperscript{20,21} as we discuss below. The increasing prevalence of obesity has been associated with increases in spending over time, but again the effect is small and is offset by the reduced spending growth associated with reductions in smoking.\textsuperscript{22-24}

A controversial question is whether America’s huge and growing expenditures on health care have led to increased benefits. Health spending has clearly been associated with health improvements, but analysts differ on whether the benefits justify the cost. Progress over the past 50 years in outcomes in cardiovascular disease, low birth weight in infants, and some cancers has been impressive.\textsuperscript{25}

But evidence of waste is equally impressive. Patients receive too much care in many circumstances, inadequate prevention leads to excessive use of acute care, many prices are still higher than necessary, and administrative costs drive up spending unnecessarily. Cross-national analyses by the Commonwealth Fund have repeatedly documented the comparatively poor performance of the U.S. health system.\textsuperscript{26} A variety of studies estimate that as much as 30% of health spending in the United States is wasted.\textsuperscript{27-29}

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**A Changing Dynamic?**

Given this history, why should anyone expect the future to look any different from the past? Several factors could be changing the underlying dynamics that have driven cost increases in our health care economy.

Medical advances are a driver of costs in the long run, so technology slowdowns may explain some of the reduction in cost growth. Indeed, new developments — especially in the form of expensive blockbuster drugs — are emerging at a slower pace than in previous decades. Of the 10 best-selling drugs in the United States in 2012, all received approval from the Food and Drug Administration before 2004.\textsuperscript{30} These trends, along with the spread of tiered formularies in prescription-drug plans, helped lower annual growth in pharmaceutical spending from 10.1% in the period 1993–2003 to 2.3% in 2003–2012.\textsuperscript{3}

The future of technological innovation is, of course, unknown. But most forecasts do not call for a large increase in the number of costly new treatments. Approval of new drugs has not increased markedly, and 17% of current pharmaceutical spending goes toward drugs that are expected to go off patent in the next 5 years.\textsuperscript{3} For this reason, forecasts of spending growth related to pharmaceuticals generally suggest only modest increases from the lows of the past few years,\textsuperscript{31} though some observers are concerned that a wave of costly new biologic agents (for which generic substitutes are scarce) will soon flood the market.\textsuperscript{32}

The diffusion of existing forms of technology is as important as the development of new ones, and here too there have been major slowing trends. The use of advanced diagnostic imaging grew more than 6% annually from the mid-1990s through the mid-2000s but then flattened.\textsuperscript{33} The use of cardiac procedures has slowed as well. For example, despite a proliferation in the number of hospitals performing coronary-artery bypass grafting and the opening of numerous cardiac specialty hospitals in the middle and late 1990s, the overall volume of bypass surgery decreased 20% from the mid-1990s to the mid-2000s.\textsuperscript{34} The use of cheaper alternative treatments continues to decrease as well.\textsuperscript{35,36}

A variety of factors are at work here. On the demand side, many people are now facing very high cost sharing, and this discourages the use of health services.\textsuperscript{37} A total of 20% of Americans with employer-sponsored coverage have high-deductible plans (Fig. 2),\textsuperscript{38} and the typical plan deductible exceeds the typical family’s available savings. In addition, many consumers have insurance policies that reward them financially for using lower-cost services.\textsuperscript{39}
Although greater cost sharing probably explains some of the spending slowdown, this cannot be the whole story. Ryu and colleagues found that health care expenses have slowed even among workers who were continuously insured with comparable benefits before and during the recent recession.

On the supply side, providers face direct restrictions on utilization, increasing incentives to prescribe less care, or both. The use of some services such as advanced imaging is now monitored. In other cases, purchasers of care — both federal and private — have introduced reforms, such as penalties for hospital-acquired conditions and preventable readmissions, that encourage more efficient care and prevention of costly adverse events. Nearly 10% of Medicare beneficiaries are now enrolled in an accountable care organization, and more than 500 hospitals are participating in a Medicare bundled-payment initiative. In the private sector, at least 235 health systems have entered into accountable care arrangements with private payers.

Evidence suggests that many, though not all, of these payment reforms lead to reductions in utilization and thus cost savings. Preliminary results from the Medicare Acute Care Episode Demonstration project, which bundled hospital and physician payments for a set of orthopedic and cardiovascular procedures, showed significant savings on both services and implantable medical devices. Meanwhile, an evaluation of the Alternative Quality Contract offered by Blue Cross Blue Shield of Massachusetts, which combines a global budget with financial incentives for meeting quality goals, showed 3% total savings in its first 2 years.

More speculatively, there is a strong correlation between the decision to penalize hospitals for high readmission rates and the recent decrease in 30-day readmissions for Medicare patients. Similarly, the reduction in payment because of health care–acquired infections has been accompanied by a reduction in the rates of these infections.

Some authors have suggested that slow cost growth may result from a reduced need for care, since trends in rates of obesity have flattened. Such changes are small as compared with overall medical spending, however. During the 2000s, rates of obesity increased by 3.8% annually, leading to projected spending growth of 0.3% annually; between 2009 and 2010, this increase was cut in half, implying a slowdown of 0.1% in growth annually.

The recent reduction in health care spending appears to have been correlated with slower employment growth in the health care field; this suggests that such changes may continue. Over the past 3 years, the annual growth in the number of employees in the health care workforce averaged 2%, a full percentage point below the 2001–2008 average. Employment growth in the hospital sector has been particularly slow, increasing at an average annual rate of just 1.0% since the beginning of the recession and 0.5% over the past year.

Health care prices also appear to be moderating, although isolating the price component of changes in health care spending is very difficult technically. Through the first 9 months of 2013, health care prices grew at or very close to 1% — the lowest rate since at least 1990. Price growth in 2011 and 2012 was a full percentage point higher, but even these readings were significantly below the 3 to 4% increases seen in the early-to-mid-2000s.

As of October 2013, well into the slow but persistent economic recovery, there is no evidence of resurging health care costs.

**GOING FORWARD**

It is too early to tell whether cost growth will remain slow. For example, in a just-released report, the Office of the Actuary at the Centers for...
Medicare and Medicaid Services assumes that cost growth will accelerate with economic recovery, though perhaps not to the level seen before the recession.\textsuperscript{2}

It is essential, therefore, to consider the consequences if cost increases return to their historical pattern. Under this scenario, the United States is projected to spend $5.0 trillion on health services in 2022, and federal health expenses will surge from $900 billion, or 25% of the federal budget, to $1.8 trillion, more than 30% of projected federal spending.\textsuperscript{51} At every level of government, health care costs would pose a crushing burden: tax-strapped governments would have to raise revenue or continue to cut back on education, housing, transportation, research and development, homeland security, culture, and the arts.

In the private sector, there would be enormous consequences as well. Private insurance coverage decreases as the costs of health insurance increase.\textsuperscript{52} This would probably continue, with more and more Americans seeking subsidized coverage in health insurance exchanges under the ACA as employers drop coverage. Not only would this increase federal spending (and thus potential deficits), but it would also cut into wage gains for all employees. Wage increases for middle-class workers are inversely related to the cost of health and other benefits. The much-discussed stagnation in U.S. wages, with all its consequences for workers’ standard of living and inequality between the very rich and most working Americans, originates to some degree in health spending trends.\textsuperscript{53}

Ultimately, the well-being of a society depends on more than health care. A poor economy is one of the surest paths to national decline. Some analysts are beginning to wonder whether health care profligacy, and the strains that such a situation imposes on society, could fundamentally undermine the economic and social well-being of the United States over the long term.\textsuperscript{54}

### Strategies to Contain Health Care Costs

Even if spending growth continues to be slow, the pressure to reduce health care expenditures will not abate. The U.S. population is aging, and nearly 70 million Americans are projected to be eligible for Medicare in 2023, up from 50 million now. This will have a small effect on total spending for care, but it will significantly increase federal spending relative to private spending.\textsuperscript{20,21}

As private managers and public policymakers look for strategies to contain health care costs, they will face two fundamental options. The first is tantamount to rationing services: reducing insurance benefits, increasing cost sharing by users of care, restricting eligibility for programs, and cutting payments to providers. Public and private actors have used all these approaches in recent years, and they will be tempted to deploy them with ever greater vigor.\textsuperscript{55}

A second strategy takes the very different direction of trying to reengineer health services to make them more efficient — to go after the one third of spending that is estimated to be wasteful. In recent years, a broad bipartisan array of expert groups have targeted reengineering as the preferred approach to managing the cost-related challenges of our health care system.\textsuperscript{56-62} The reengineering approach includes several key elements: reforming the system of payments to providers, reforming the delivery system, engaging consumers in making better health care choices, making health care data more available, and reducing administrative expenses.

Almost without exception, recent studies of health care costs have recommended discarding the current fee-for-service payment system in favor of having providers share risk for the cost and quality of services. These alternative arrangements could include capitation or partial capitation, global budgeting, and risk-sharing arrangements such as those embodied in the accountable care organization program created by the ACA.\textsuperscript{63} A key component of these payment approaches is that providers do better financially when they avoid unnecessary care and deliver higher-value services.

Experts also emphasize the importance of strengthening at least three elements of current health care systems: the availability and usefulness of health information, coordination of care, especially for the sickest patients and those who require the most expensive services, and primary care services.\textsuperscript{64}

Analysts believe that with better information and better-designed incentives, consumers can make choices that will enhance the value of the care they receive.\textsuperscript{65} This might involve rewarding patients for choosing providers and organizational arrangements (such as accountable care
organizations and patient-centered medical homes) that are associated with better outcomes and lower costs of care. Tiered networks constitute an early version of this approach to consumer engagement. Ultimately, consumer engagement may also involve helping patients play a greater role in managing their own chronic conditions using new information and new methods of communication.66

In addition, whether the goal is to assist providers in improving their performance or consumers in making wise health care choices, data on the performance of the health care system are vital. For example, patients will be unable to make wise economic choices unless they know the prices providers charge and the quality and safety of the care dispensed. The federal government has begun a concerted effort to make Medicare data more publicly available, but combining public and private data remains a considerable challenge.67

Another aspect of potential reengineering is that the costs of marketing health insurance and expenses associated with billing and payment are huge sources of inefficiency.68 The standardization of forms and processes for billing and claims and reduction of insurers’ administrative expenses (which have already begun under the ACA but with much more to be done) are viewed by most observers as critical to reengineering our health care system for efficiency.69

The increasing consensus concerning these approaches to reengineering health care in the United States, the awareness of savings opportunities, and the threat of resumed growth in health care spending provide an opening for constructive, systemic reform that avoids the pain associated with health care rationing. Regardless of whether per capita expenses resume their pre-recession rates of escalation, these opportunities are likely to stay on the private and public health care agenda for the foreseeable future.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.


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