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When does curbing health costs really help the economy?
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Prologue: If one pays any attention to the current debate on health care costs, it may seem counterintuitive to pose the question that is the title of this paper: “When does curbing health costs really help the economy?” Many persons both inside and outside the sphere of health policy take it for granted that cutting health care costs is an admirable—even necessary—pursuit. Nearly everyone, from the Clinton administration to policymakers on Capitol Hill to health industry executives, has gone on record in support of health care cost containment. The burgeoning managed care sector is based on the premise that a large part of managing care is managing its costs. However, Mark Pauly argues here that “the effect of containing or slowing medical spending growth is likely to be quite different—for American business, for savings rates, and for overall economic well-being—depending on whether what slows is growth in resources used or growth in their prices.” The paper intends to clarify a health policy paradox: To reduce medical spending means slowing the growth in jobs or wages and profits in the health sector; such a move will have negative repercussions for the economy as a whole. The paper offers two simple models for separating the effects of changes in input prices or changes in employment on the larger economic picture. Elsewhere in this volume, Ralph Monaco and John Phelps present an alternative model examining these same issues (“Health Prices, the Federal Budget, and Economic Growth,” pages 248-260). Pauly is the Bendheim Professor, chairman and professor of the Health Care Systems Department, and professor of insurance and public policy and management at the Wharton School, University of Pennsylvania. He received his doctorate in economics from the University of Virginia. His recent proposal, along with John Goodman, for medical savings accounts (MSAs) and tax credits has attracted the attention of journalists and policymakers across the nation.
Abstract: Growth in U.S. health spending has historically been associated with growth in prices paid to health care inputs in excess of economywide inflation and to increases in the employment of health inputs. Increases in input prices largely result in transfers from some citizens to others, while increases in employment mean less of other outputs—which is harmful if those other outputs are more valuable than medical services. Price increases are shown to account for 25 to 50 percent of U.S. medical spending growth in recent years.

Medical care spending in the United States, it is commonly noted, rises more rapidly than general inflation, more rapidly than gross national product (GNP), and more rapidly than politicians prefer. It is often alleged that this growth hurts the economy. For example, Gerald M. Shea, director of employee benefits at the AFL-CIO, alleged that regulation of medical spending growth is necessary because “even with all the competition in the world, we couldn’t get costs in line as fast as we need for the good of the economy.” More recently, limiting the growth of Medicare-paid costs has been targeted as important to overall economic well-being, and slowing growth of private-sector spending is regarded as salutary. But why (or when) does “getting costs in line” help the economy?

Real (inflation-adjusted) medical spending growth, by definition, is the combined effect of hiring a larger quantity of inputs in the medical services sector and paying wages or prices for those inputs that rise more rapidly than wages or prices in general. (Profit can be viewed as the price paid for equity capital.) In this paper I argue that the consequences for the economy as a whole, and for consumption of other goods and services, vary depending on whether spending grows because quantity grows or because prices grow. This has an important policy implication: The effect of containing or slowing medical spending growth is likely to be quite different for American business, for savings rates, and for overall economic well-being depending on whether what slows is growth in resources used or growth in their prices.

My focus thus is on how to evaluate the consequences of public or private “cost containment” policies, not on proposing alternative policies or predicting their success in affecting the accounting measure of medical spending. This paper takes up where the recent (and numerous) attempts to predict health spending leave off and argues that one needs to know some additional important things in evaluating a given level of spending growth. This distinction is important in theory; using data on past spending growth, I show that both influences on spending growth have been important and changeable. The implication is that a similar dissection of future changes in health spending growth ought to be part of the analysis of any scenario evaluating or describing what is happening to U.S. medical spending.

This issue has had policy relevance. The Clinton administration proposed limiting the rates of growth in insurance premiums to contain costs,
which is likely to affect both resources used and prices. In contrast, the House Ways and Means Committee passed a bill that envisioned imposing strict unit price controls on physicians, hospitals, and drugs to enforce spending limits. The spread of health maintenance organizations (HMOs) and other managed care plans has been accompanied by strong effects on the volume of services (especially hospital admissions) but more recently may also be associated with heavy price discounting and reductions in providers’ profit margins. Different strategies will have different effects on the economy as a whole and therefore should be evaluated differently.

This paper is intended to clarify a health policy paradox. We want to reduce the growth of medical spending. In doing so, however, we will have to slow the growth of jobs or wages and profits in the medical sector. How does the economy as a whole gain if job growth and wage growth are cut in such an important sector? I argue that standard measures of macroeconomic well-being, such as GNP, will not be helpful here, nor will simple indicators of medical spending speak for themselves in allowing us to judge whether or not a particular change is desirable.

To fully grasp the effect of changes in input prices or employment on spending growth, one needs to know the reason for the change in prices or employment. Did prices change because of a shift in supply—because of demographics, for example, or because of a shutdown in low-cost hospital-based training programs? Or did wages rise because of increased demand, from some source, pressing on a limited supply? Did employment grow because rising real incomes led to a demand for new technology, because the spread of tax-subsidized insurance loosened the discipline of the market, or because a genuinely new and brilliant but costly medical invention dropped from the sky? To a considerable extent, an overall judgment about the good or harm to the economy—which is, after all, only a representation of the good or harm to the people in it—must depend on the reason for the changes. Determining those reasons is not possible in this paper (nor very easy to do ever). Instead, the paper adopts the more limited but still useful perspective of trying to parse out the changes in spending that do occur and then trying to judge their effects on the economy, regardless of their causes.

Two Simple Models

Viewed purely in a monetary sense, higher medical spending redistributes financial flows but does not necessarily change the total amount of spending in the economy. In contrast to a single household, the economy as a whole does not lose money if more is spent on medical services, since what one agent spends, another agent receives. To understand the impact of spending growth on real well-being, we need to go behind the monetary
veil and look at the things people really value. It turns out that a given increase in medical spending has different impacts on real well-being, aggregated over all Americans, depending on the form of the spending increase.\footnote{In particular, spending increases that are attributable to higher incomes or profits paid to suppliers of medical goods and services (commonly called “greed” in the political debates) have a different impact from that of spending increases that are attributable to the use of more inputs in the medical services sector (commonly called “waste” if the inputs are not used to provide services of obvious value). Put crudely, greed and waste have quite different impacts on the economy: Greed is usually less harmful than waste, and greed may not even be harmful at all to aggregate national well-being (if only we knew how to measure well-being accurately). Not all high incomes should be termed “greed,” and not all increased employment is “waste.” But how can we tell? To illustrate these points, I consider two simple models, one in which spending grows entirely because returns to or incomes of inputs (“input prices”) grow, and the other in which growth occurs entirely because the quantity of inputs (“employment”) in the medical sector grows.}

**Growth in input prices.** Consider an economy in which overall inflation is zero and there is no international trade in medical services or products. Now suppose that suppliers of medical care inputs raise prices but sell the same quantity. (Either demand is perfectly inelastic, or other positive influences on demand offset any effect of price on quantity.) Total spending on medical services will grow, and economywide spending on other items of consumption and/or the money value of savings must decline. From the viewpoint of the economy as a whole, assuming that all inputs are supplied domestically, the higher spending by consumers of medical care is exactly offset by higher incomes of suppliers of medical services and products. Likewise, the lower levels of the total amount of other consumption and savings by consumers of medical products and services are exactly offset by higher levels of the total amount of consumption and savings by producers or suppliers of those items. There is then a redistribution of real income, but no change in its real aggregate. (Whether overall savings rates change, or whether there are changes in the mix of nonmedical consumption, depends on whether suppliers have different spending patterns or saving propensities than do households that are only consumers of medical services.) Of course, if we had a way of valuing income changes for different groups of people in terms of their social desirability, we might not be indifferent about this redistribution. Economists sometimes imagine that there can exist a “social welfare function” that can make such weights, but this has little relevance to the usual
macroeconomic measures.

If, in contrast, the quantity demanded of medical services and medical inputs falls when price is increased, then the well-being of consumers as consumers could fall additionally. A key question then is whether this reduced consumption would represent services whose value to consumers is greater or less than the services’ true (or social) opportunity cost. Higher (monopoly) prices usually mean a welfare or efficiency loss for the economy because higher prices discourage consumers from buying products whose benefits are greater then their costs. However, conventional health insurance often causes consumers to demand services worth less than their cost—the so-called moral hazard phenomenon—so that higher medical prices that discourage this inefficient consumption may actually increase net benefit.

**Growth in employment.** The other simple case is obviously the one in which prices for inputs are held constant, but the level of inputs employed in the medical care sector grows. Would reversing this trend be good or bad for the economy as a whole? The answer here (as elsewhere in economics) is, “It depends.” In this case, it depends on what happens to the inputs and outputs of medical services. Three quite different scenarios are possible.

First, it may be that the inputs discharged from the medical sector are not employed elsewhere; people lose jobs in hospitals and doctors’ offices that they cannot or do not replace. In this case, if there is any (net) reduction in beneficial output in the medical sector whatsoever, cutting spending does harm. In real terms, consumers in total get fewer medical services, but (since the inputs are then left unused and unemployed) they get no more of other goods and services. So the total amount of consumption of all types falls. That is, medical benefits fall, and no other benefits rise; the opportunity cost of the medical output turns out to be zero, given that inputs used to produce it have no alternative use. Of course, consumers who have no suppliers of medical inputs in their households may be better off—if their reduced level of beneficial medical services is worth less to them than the reduced spending (direct and covered by insurance) that they pay. However, the input suppliers who become unemployed are worse off, and the loss to suppliers will exceed the gain to demanders unless the services lost were completely useless or harmful. In general, then, if the released inputs remain unemployed, cutting medical spending does harm to the economy as a whole.

The second case is one in which the released inputs do find employment elsewhere in the economy, but the value of the output they produce in their new employment is less than the value of the lost medical output. In this case, there will be a decline in medical spending, offset by an increase in other spending, but the net effect will still be harmful to the economy.
Suppliers of medical inputs will get jobs doing other things, so their incomes may not fall. However, the pattern of consumption for all consumers will yield less value than the previous one, even though the total money value of consumption might be unchanged.

The third case is the one that advocates of spending reductions or imposed budget caps must have in mind: Real inputs move from the medical care sector to other sectors, but the value of the lost medical output is less than the value of the additional output of other goods and services (plus savings) that can be realized. In this case, reduced spending on medical goods and services releases those inputs needed to produce the other items of consumption or savings/investment that are of greater value. Suppliers of medical inputs lose their medical jobs but get better and more valuable jobs making other things.

The conclusion, then, is that cutting spending growth by cutting prices paid to medical inputs does neither harm nor good to the economy as a whole. (Perhaps it would be an even greater waste of effort if high prices prompted insurers and employers to look for ways to cut quantity— but they would be responding to distorted signals in doing so and might well overshoot the optimum.) Cutting spending by cutting medical jobs may do either good or harm, depending on the final destination of the medically unemployed. We do not have sufficient information on relative values and the workings of labor markets to judge whether the “cut jobs” strategy is a plus or a minus. I do not know of any models or data strong enough to answer this question of relative value: Is a mammogram for a forty-five-year-old woman or a drug for migraine headache worth more than using the same resources to produce a tire, a play, or a fire department call? The standard measure of “productivity” uses market prices for most outputs (including health care) and input prices for public spending—and the whole point of this discussion is that these prices are distorted. But we do have some information on the role and impact of price changes.

Looking Backward And Forward: Spending Growth And Savings Rates

One of the most pronounced and troublesome changes in the U.S. economy over the past forty years has been a steep decline in the rate of saving. While the actual share of GNP that is saved was and is quite small, that decline coincided with—and matched to a large extent—the increased share of GNP going to medical care. To some (small) extent, spending on preventive medical care is a kind of investment in human capital, so there could be a degree of substitution of one type of productivity-enhancing investment for another. But the most obvious consequence of reduced conventional saving caused by higher medical spending would be a lower
investment rate or a greater reliance on foreign funds to finance a given investment rate. Since the investment rate helps to determine the rate of economic growth, any negative effects of medical spending growth on investment will adversely affect growth in the economy as a whole.

Suppose, however, that medical spending growth is caused entirely by rising input prices, rather than by growth in real inputs. The medical share of GNP then rises, and the share going to savings must fall. Does this mean that the growth of real output will fall if there is no full offset from foreign investment? The answer turns out to be negative. If relative medical input and output prices rise, but overall price levels are held constant (or adjusted for in the discussion), the money share of GNP going to savings and investment may be forced down. But if the monetary authority is holding overall inflation at zero, the consequence of higher medical spending growth is a fall in the relative price of the investment goods purchased by savings. In this case, the money savings and investment share of GNP falls, but the real amount of investment, and therefore the real share of savings and investment, must remain the same.

The Composition Of Spending Growth

If the consequences of spending growth depend on the way in which spending is growing, what has been the division of recent spending growth into real inputs and output prices? Has recent medical spending growth, much bemoaned by politicians and commentators, been predominantly the macroeconomically harmful or harmless type?

We first need to develop some benchmark estimates of spending growth, purged of the effects of economywide inflation. As indicated in Exhibit 1, there are two alternative series for total spending: national health expenditures and personal health expenditures. The latter are obtained by subtracting from the former expenditures on capital construction, research, and administrative expenses of health insurance, public and private. Thus, personal health expenditures roughly correspond to expenditures for medical care per se, while national health expenditures measure the cost of the system of care delivery and financing. Generally, the growth rates of two series are within 0.5 percent of each other. In what follows, since we are primarily interested in medical technology in terms of services delivered and medical input prices, I use personal health expenditures to measure spending.

Two deflators for economywide inflation are used. The Consumer Price Index (CPI), with the effect of medical care prices deleted, is one deflator. It converts nominal spending into real units of nonmedical goods and services that must be sacrificed. The alternative fixed-weight GNP price
Exhibit 1
Annual Percentage Growth Rate Of National And Personal Health Expenditures, 1965-1993

<table>
<thead>
<tr>
<th>Year</th>
<th>Nominal National Health Expenditures</th>
<th>Deflated by CPI</th>
<th>Deflated by GNP Deflator</th>
<th>Nominal Personal Health Expenditures</th>
<th>Deflated by CPI</th>
<th>Deflated by GNP Deflator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965-1970</td>
<td>12.3%</td>
<td>7.9%</td>
<td>7.8%</td>
<td>12.8%</td>
<td>8.4%</td>
<td>8.3%</td>
</tr>
<tr>
<td>1970-1975</td>
<td>12.3</td>
<td>5.2</td>
<td>5.4</td>
<td>12.4</td>
<td>5.3</td>
<td>5.5</td>
</tr>
<tr>
<td>1975-1980</td>
<td>13.4</td>
<td>4.2</td>
<td>5.7</td>
<td>13.4</td>
<td>4.2</td>
<td>5.7</td>
</tr>
<tr>
<td>1980-1985</td>
<td>11.7</td>
<td>6.2</td>
<td>6.3</td>
<td>11.6</td>
<td>6.1</td>
<td>6.2</td>
</tr>
<tr>
<td>1986</td>
<td>7.2</td>
<td>5.5</td>
<td>4.5</td>
<td>8.9</td>
<td>7.2</td>
<td>6.1</td>
</tr>
<tr>
<td>1987</td>
<td>8.6</td>
<td>5.0</td>
<td>5.3</td>
<td>9.5</td>
<td>5.9</td>
<td>6.2</td>
</tr>
<tr>
<td>1988</td>
<td>11.0</td>
<td>6.9</td>
<td>7.5</td>
<td>10.2</td>
<td>6.1</td>
<td>6.7</td>
</tr>
<tr>
<td>1989</td>
<td>11.0</td>
<td>6.1</td>
<td>6.2</td>
<td>10.0</td>
<td>5.7</td>
<td>5.3</td>
</tr>
<tr>
<td>1990</td>
<td>11.6</td>
<td>6.1</td>
<td>7.0</td>
<td>11.2</td>
<td>5.7</td>
<td>6.6</td>
</tr>
<tr>
<td>1985-1990</td>
<td>9.9</td>
<td>6.0</td>
<td>6.3</td>
<td>10.0</td>
<td>6.0</td>
<td>6.3</td>
</tr>
<tr>
<td>1991</td>
<td>8.5</td>
<td>5.2</td>
<td>9.5</td>
<td>5.4</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>8.6</td>
<td>5.7</td>
<td>2::</td>
<td>8.8</td>
<td>5.9</td>
<td>5.7</td>
</tr>
<tr>
<td>1993</td>
<td>7.8</td>
<td>5.0</td>
<td>5.6</td>
<td>7.2</td>
<td>4.3</td>
<td>4.9</td>
</tr>
</tbody>
</table>


Note: Deflated by Consumer Price Index (CPI) less medical care and gross national product (GNP) deflator.

* Annual growth rate for the CPI less medical care.

b Annual percentage rate of change for the GNP implicit price deflator.

Index is commonly used by Health Care Financing Administration (HCFA) actuaries and is the same index used to deflate nominal GNP to obtain the official figures on real GNP growth. This deflator includes the effect of medical prices (a deficiency that is discussed below) and differs in some other ways from the CPI. As can be seen, the deflator used does make a difference in the calculated real rates of growth in personal health expenditures, especially in 1975-1980 and in 1985-1990.

In most of what follows I concentrate on the 1980s plus 1991. The real rate of growth in spending averaged 6.2 percent in the first half of the decade and 6 percent for the second half. About one percentage point of real growth is attributable to population growth. Thus, we can say that medical spending per capita, in real dollars (that is, adjusted for economy wide inflation), grew at a rate of about 5 percent over this period. Since real GNP per capita grew at a much slower rate, about 2 percent per year, the share of GNP going to medical spending must rise.

Now consider alternative ways of disaggregating the growth in medical spending in real dollars into two components: price increases (above economywide inflation) and real quantity. There are two approaches to disaggregation. The most common approach deflates total spending by a
price index and therefore calculates growth in quantity as a residual. The other approach, which I also illustrate, develops an independent measure of growth in real quantities and then solves for “excess inflation” as a residual.

Price indexes can be indexes of either output prices or input prices. Roughly speaking, the residual quantity measure obtained when output or product prices are used is a measure of real consumption, while the residual obtained from a measure of input prices reflects real input growth. The output measure suffers in practice from failure to adjust for quality changes, so that an increase in output price associated with an increase in quality may show a decline in “real” output and (by implication) well-being, when in fact precisely the opposite has occurred. Since we have no reliable basis for measuring aggregate medical quality, disaggregation of growth based on output price indices will always be suspect. The input price (or wage) measure comes closer to measuring the burden on the economy and differs from the former in failing to incorporate changing productivity (or waste) and changing profit margins. In effect, however, the profit of a business is the price paid to (equity) capital and ought to be treated as an input price.

The simplest price index to use for decomposing real spending into its component parts is the medical care component of the CPI. This index uses weights based on shares of household out-of-pocket spending, so it weighs heavily insured services, such as hospital care, at lower weights than their shares of total spending, insured plus uninsured. The second column of Exhibit 2 shows the percentage of the real growth in the first column that is attributable to this measure of price. By this calculation, medical price increases in excess of general inflation in the 1980s made up 54 percent of real growth. The real growth rate in inputs, by this calculation, was about

<table>
<thead>
<tr>
<th>Exhibit 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Percent of growth attributable to excess medical inflation</th>
<th>Percent from HCFA decomposition (uses hospital transactions price)</th>
<th>Percent from alternate decomposition (uses AHA market basket for all outputs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real growth rate</td>
<td>Percent from medical care CPI (output price)</td>
<td>15%&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>1965-1970</td>
<td>8.4%</td>
<td>-</td>
</tr>
<tr>
<td>1970-1980</td>
<td>4.8%</td>
<td>-</td>
</tr>
<tr>
<td>1980-1990</td>
<td>6.1%</td>
<td>54%</td>
</tr>
<tr>
<td>1990-1993</td>
<td>5.2%</td>
<td>80%</td>
</tr>
</tbody>
</table>


<sup>a</sup> Deflated by Consumer Price Index (CPI) less medical care component.
<sup>b</sup> 1960-1970.
<sup>c</sup> Not available.
2.8 percent, only modestly above real growth in GNP. However, the medical CPI does not separate out the effects of changes in inputs per unit of output, along with profits and input prices, and does not adjust well for effects on quality. The inputs used per unit of medical output surely rose over this time period. While we cannot distinguish improvements in quality that required increases in inputs from true productivity declines (if any), measures of resource-use growth using the CPI likely overstate the importance of price increases relative to measures based on input prices.

The most frequently cited decomposition, by HCFA, uses an index that is a mix of output and input prices. HCFA traditionally used input prices for hospitals, nursing homes, and home health but in recent years has converted to the use of a net output product price (after discounts or deviations from charges) for hospital care. Using this current HCFA measure, we see that prices were estimated to account for somewhat less than half of real spending growth in the 1980s) less than the estimates based on the medical CPI but up from a much smaller share in the 1970s.

The most important component of the HCFA price index is the rate of price change for hospitals (because hospital spending is the largest single component of personal health expenditures). In HCFA's current index, this component's growth is measured by a transaction price index, which would be affected by changes in inputs per unit of output or by increases in profit margins. (The hospital index is based on what hospitals are actually paid, net of discounts and adjustments, not on their book or posted prices.) A better index of input prices therefore would be one that used an input price measure for the hospital component. There are two possible candidates for a hospital input price index. One is provided by HCFA itself and is used to adjust the payment levels under the diagnosis-related group (DRG) system. The other is the "hospital market basket index" calculated by the American Hospital Association (AHA). Although there are a number of technical differences between the two indexes, the primary difference is in the choice of price proxy for the prices (wages and benefits) paid for hospital labor. The AHA market basket relies entirely on data specific to the hospital industry to measure wage changes. Its labor cost proxy is the average payroll expense per full-time-equivalent hospital employee. The HCFA index, by contrast, bases its wage measure on a blend of hospital industry-specific and economywide wages. The result is that only about 30 percent of the HCFA hospital wage index growth is based on wages actually paid by hospitals.

There is a good reason why HCFA takes the approach it does in its hospital input price index (and its other indexes for nursing homes, home health, and the Medicare Economic Index [MEI] for physician practices). It uses these indexes to update its payment levels, and it fears that incorporat-
ing all actual wage increases into that index in effect validates those wage increases. If all hospitals foolishly and inefficiently gave large raises, Medicare should not therefore have to pay more. In addition, there is the view (especially for the MEI) that Congress intended reimbursement rates to be “fair” (that is, tied to what other workers get), not set at market levels. In effect, HCFA measures the wages that ought to be paid, not those that are paid. This means that while the HCFA input price index is quite appropriate for its own purposes, it is not as good a measure of actual prices paid as the AHA index is.

The AHA hospital input price index generally increases more rapidly than the HCFA/prospective payment system (PPS) input price index does but less rapidly than the HCFA output price index does. We also show in Exhibit 2 the proportion of total spending accounted for by input prices by deflating all health spending by the AHA input price index.

An alternative strategy to using input price indexes is to measure the volume of inputs directly. That is, instead of having quantities be the residual, as in the previous case, one can let prices be the residual. We do have measures of employment in the medical care sector, but not of other inputs. If we assume, however, that other inputs increase proportionately with employment, and that the composition of employment changed little, employment growth can serve as a reasonable index of input growth. Calculations showing the employment growth rate, and the implied share of input price growth, are indicated in Exhibit 3. These calculations suggest a price share in the 1980s of about one-third, on average, with the share falling somewhat toward the end of the period.

Implications. In all of these calculations, some nontrivial share of recent spending growth is attributed to input price growth. One can conclude that between one-quarter and one-half of the growth in real spending in the 1980s and the first three years of the 1990s is attributed to input prices.

### Exhibit 3


<table>
<thead>
<tr>
<th>Period</th>
<th>(Private) health services employment, growth rate</th>
<th>Percent of growth attributable to excess medical inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965-1971</td>
<td>6.6%</td>
<td>_a</td>
</tr>
<tr>
<td>1971-1981</td>
<td>5.8</td>
<td>_a</td>
</tr>
<tr>
<td>1981-1985</td>
<td>3.4</td>
<td>42%</td>
</tr>
<tr>
<td>1985-1990</td>
<td>4.5</td>
<td>25</td>
</tr>
<tr>
<td>1991</td>
<td>4.7</td>
<td>13</td>
</tr>
<tr>
<td>1992</td>
<td>3.8</td>
<td>36</td>
</tr>
<tr>
<td>1993</td>
<td>3.3</td>
<td>23</td>
</tr>
</tbody>
</table>

**Source:** Calculated from the data in Health Care Financing Review, various years.

* No excess medical inflation in time period.
rising more rapidly than general inflation. Moreover, as Exhibit 2 shows, the price share of growth was much higher in this period than in the 1970s. So perhaps a sizable part of this spending growth was harmless to the macroeconomy, and valuation of the other part—the growth in real inputs—depends on how one values the output of medical employment compared with other employment. True costs rose by perhaps only half to three-quarters as much as they appeared to have risen and might therefore be judged to be less needful of capping or slowing.

**Forecasting Future Changes**

One way to get some insight into the impact of price changes relative to quantity changes in the future is to examine some projections of (unregulated) future health spending growth. An example of such an estimate is the “Projection 3” scenario in the set of estimates assembled for the December 1991 Expert Panel Report to the Advisory Council on Social Security. These estimates are intended to predict what would happen under current law and institutions, in the absence of health reform. (The assumptions made by the HCFA Office of the Actuary in this report have been altered slightly since the report’s release.) The panel wished to develop estimates of the future share of gross domestic product (GDP) spent on health care and then to examine the feasibility of such a share, given the adjustments the economy would need to make.

In this scenario, for the period 1990-2020, “medical” real (deflated by medical prices) health care spending and resource use per capita is projected to grow by 2.2 percent, while excess health care price inflation (over general inflation) is expected to be at 0.9 percent annually. This yields a growth rate for health care spending in “GNP” real dollars (deflated by the GNP price deflator) of 3.1 percent per capita. Since total real GNP per capita is projected to grow at a rate of 1.1 percent per year, the share of health spending in GNP obviously will grow. Indeed, under Projection 3 it is projected to reach 22.7 percent in 2020. The expert panel then concluded that it will be difficult for other consumption and investment to accommodate this increase in medical spending alone.

The panel projected that age-adjusted nonmedical personal consumption spending per capita would grow at a rate equal to the rate of growth of real GNP (at 1.1 percent). After age adjustments, the GNP share of all other personal consumption expenses would then increase slightly (because the elderly consume more), from 58 percent of GNP to 61 percent of GNP. The combined projected decline in public education expenses and national defense expenses of 3 percent of GNP would be enough to accommodate this demographic shift. But the additional increase in the medical personal
consumption spending share, of eight percentage points, could not be accommodated; the panel concluded that “it does not add up.” That is, other spending cannot reasonably be reduced enough to accommodate this increase in medical spending. Were real spending to be adjusted to accommodate the increased medical care share, real personal consumption per capita for nonhealth goods and services could increase only $2,400 over thirty years (from $11,100 to $13,500), a much lower rate than has historically prevailed. The panel speculated that such a low rate of increase would be intolerable and probably unfeasible, politically if not economically.

These calculations are misleadingly pessimistic, however, because they look at spending, not real resources. The story is quite different if we remove relative price changes and look at real resource flows into providing medical care. With relative price changes removed, real resources going into health care per capita will grow by 30 percent less than the 3.1 percent growth in total spending; real resource growth will be only 2.2 percent. Real health resources consumed per capita will grow by $1,900, which means that given the projected growth of GNP, real consumption and investment of other types can grow from $11,100 to $15,400—nearly twice as much as the projection reported to the panel. To be sure, this rate of increase is less than has been true historically, but it no longer appears outlandishly low.

The fundamental cause of the problem in the panel’s calculations is that the GNP deflator, which is an index of all prices including medical care, should not be used to deflate nonmedical consumption spending if one is trying to get a measure of real resources consumed. Instead, one should use an index with medical care prices left out. Likewise, medical spending should be deflated by an index of medical prices, not by an index of all prices, if one seeks an index of inputs into medical services.

Looking Forward

What of efforts devoted to slowing down medical spending growth? One message is quite clear: Methods specifically targeted at reducing price and wages-price controls, jawboning, “voluntary” industry price restraints, or the creation of coalitions of employer purchasers or managed care firms whose purpose is to extract discounts do not do much good for the economy as a whole, and may even harm it. Consumers of medical care stand to gain; health care workers and persons and pension funds owning medical stocks stand to lose. In the aggregate, however, Americans neither gain nor lose.

The analysis thus far has been based on the assumption that the revenues needed to cover the additional spending caused by price increases are paid from the private sector in ways that do not distort other economic activity.
This is usually a reasonable assumption for payments in private markets: When one pays a higher price for a service, the only consequence is that one needs to sacrifice more of one's budget for that purpose. Increases in Medicare Part B premiums, or cuts in welfare benefits with the funds used to pay for Medicaid, would represent a similar sort of nondistortive collection of funds for transfer to more highly paid health care workers from the public sector. But, as Uwe Reinhardt has noted, some public-sector transactions are different from private-sector ones; paying for higher medical wages by cutting other public spending or by raising taxes may have effects beyond the simple transfer of resources.

Consider the effects of increasing tax rates to pay for higher levels of medical spending. In theory, higher tax rates may cause distortion of private-sector economic behavior. If the taxes are on income or payrolls, they may discourage work effort. This effect on work incentives is part of the reason why political conservatives oppose tax increases, whereas political liberals usually allege that the deterrent effect of tax increases (such as President Clinton's budget reform) are not likely to be substantial.

If tax rates are increased to pay higher transfers to medical care workers and the political conservatives are right, those taxes will distort economic behavior. Economists term this distortion the "excess burden" of taxation; typical estimates of excess burden from the U.S. federal tax system are in the range of 20 to 30 percent of the amount collected. If these estimates are correct, the implication is that wage and price increases in medical spending that do result in additional taxes of these sorts "cost" the economy approximately 20 percent of whatever portion of those price increases is financed by taxes.

The other distortive source of public program revenue to cover higher medical prices is a reduction in other types of public spending. How much does this cost the economy? If we assume for the moment that taxes are not seriously distortive, and if we assume that the political process is economically efficient-in the sense that the value of the last dollar of each type of public spending to citizens equals a dollar-then cutting other types of public spending to finance higher medical prices or wages will not have a net economic cost. In this case, reducing other government spending by one dollar—cutting education, infrastructure, or other spending—would be equivalent to taking away one dollar's worth of benefit from private citizens. In such a case, rising medical prices and wages still only cause a transfer, since the lost benefit to all citizens from less public spending is simply offset by the benefit received by the recipients of the transfer.

Things are different if other types of public spending are not at the efficient level. Majority rule does not necessarily mean that spending is set at the efficient level, and the need to finance that spending by distortive
taxes means that the level of spending may not be at the level at which a

dollar less public spending is just equal to a dollar less in value for the
citizenry. If public spending levels are too high—surely a possibility in a
world where log rolling, pork barrel, and bureaucratic waste are part of
common speech—then, paradoxically, rising medical wages and prices ac-
ually make the economy as a whole better off: The gains to health care
workers in higher incomes are of greater value than the lost public benefits.
But if the level of public spending is set below the efficient level, which is
also possible, transfers to nurses and doctors and technicians may displace
public spending of greater value, and the economy as a whole suffers.

In summary, if there are to be aggregate beneficial effects of reduced
medical spending, it is best to cut health care employment and jobs, not
drug company profits, nonprofit hospital net revenues, physician incomes,
or nurse wages. Negotiating to cut the use of care, close hospitals, and move
workers to other industries has the best chance of helping the economy—
but even that will depend on whether the extra output (consumption and
investment) from the displaced and transferred workers is of greater value
than the lost medical output. It is this relative-value question, which can
best be approached by considering who is and who will be employed at
producing what, that ought to be the centerpiece of analyses of health “cost
containment” programs.

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NOTES

B11.
Health Affairs (Fall 1994): 88-99.
3. A similar point has been made by Stephen Jencks and George Schieber. S.F. Jencks,
4. An alternative set of measures for hospitals, only through 1989, has been provided by
Victor Fuchs also provides some evidence on the growth in relative real incomes of
medical personnel, especially rank-and-file health care workers. V. Fuchs, “The Health
Health Care: Economic Implications 1991-2020” (Washington: ACSS, December