

## Will the United States Continue to Allocate a Growing Proportion of Its GDP to Health Care?

Stuart H. Altman

In 1971, having absolutely no experience with or knowledge about the economics of health care, I became the deputy assistant secretary for health policy at what was then the U.S. Department of Health, Education, and Welfare. To this position, I brought a strong belief in the free market, having trained at a University of Chicago farm school, UCLA. Many of you know that there were no such things as health economists back then. So, being almost as arrogant as a surgeon, I thought: Why shouldn't an economist be in charge of American health care policy? But as you will see as my presentation progresses, I no longer believe that private market forces alone can really help to improve coverage and lower the rising trend in health care spending.

In August of 1971, Richard Nixon, our conservative Republican president, imposed wage and price controls on the American economy. I was then asked to come to the White House and explain why health care spending was growing so rapidly. All the president's men were there. Herb Stein, the chairman of the Council of Economic Advisors, turned to me and said, "Dr. Altman, do you know how much money we're spending on health care?" And before I had a chance to say anything, he said, "We are spending 7.5 percent of our gross national product on health care, and if it reaches 8 percent our whole way of life is going to deteriorate." Stein said, "It's going to be your job to make sure that doesn't happen." Clearly, the growth in health care costs did not stop at 8 percent of GDP, and we are still being told that if we don't stop the growth in spending, our health care system could collapse. My current thinking on this matter reflects my being a two-handed economist.

On the one hand, I listened to Gene Steuerle, I listened to all the numbers mentioned at this conference, and I heard many of you say that the level of spending for health care in general, and for Medicare in particular, cannot keep going up. It is just too high! On the other hand, I keep looking at the rate of growth that we have had over these last 30 years, and I respond with two observations. One, health care costs just keep going up; and two, our American way of life has not totally deteriorated. Of course, maybe in the future it will be different.

In theory I agree, as some of you argue, that there are things that we can do. But the reality is also what we have discussed: Do we have the political will to do these things? And if you look over the decades since the mid-1960s, you will see that we had two periods when we did lower the rate of growth in health care spending. One was in the 1970s, when we regulated the growth in health care spending. We peppered the country with planning agencies, and we put in place several forms of price controls and supply constraints, and these changes did slow the rate of growth in spending, at least for a while.

I am sure many of you would say that it was inevitable that health care spending would resume its upward growth and return to its normal pattern. And, in fact, that is surely what happened in the 1980s. Well, it may or may not have been inevitable, but our political will was such that we could not, or would not, support those whom we asked to keep spending under control. And, by the way, for those of you who do not remember history, it was the Democrats who took the power away from the Nixon administration in 1974 to control wages and prices. By that time, the administration had limited the wage and price control system to only limit health care spending.

The reason the Democrats took it away was that they were concerned that the Nixon administration was primarily regulating the wages paid to health care workers and not the prices paid by patients or insurance companies. But, be that as it may, the reality was that when the United States entered the 1980s, we had what I call halfway competitive markets and ineffective regulation in the health care sector. "Katie, bar the door!"—you could spend anything and get anything you wanted—the actual growth rate of health care spending in the 1980s was really phenomenally large. Then in the early 1990s, the United States greatly expanded

the use of managed care, particularly by private companies that were trying to slow the growth in their health insurance premiums. Some people, particularly health providers and patients, called it “damaged care,” but the reality is that managed care did exactly what we wanted it to do. It lowered the rate of growth of spending to the rate of growth in our national income, and generated a zero rate of growth in health insurance premiums. And then, we said we did not want what we had asked for. Whose stupid idea was this in the first place? Anybody who was in managed care was immediately shot and they were gone. Now they are again called insurance executives.

By the end of the 1990s, these same insurance companies said, “Why should we regulate health care use or prices? No one else wants us to regulate. We will just raise premiums.” And so, now we are back to the 1980s’ situation of escalating health care costs, and premiums have been growing at close to double-digit rates since 2000. So, the question today, in the first decade of the twenty-first century, is: Can we or do we have the political will to introduce something to stem the tide of these rising costs? If we don’t make some major changes in the system, there is no question that we are going to see a continuation of the current trend in escalating healthcare spending—for some very good and for some not-so-good reasons that we have heard about in other sessions. Having better medical technology to improve health status and having an aging population are both good reasons to spend more on health care.

What is not so good (or at least is harder to justify) is that we have surprisingly little information to help patients and health professionals decide what types of treatments really benefit patients. Additionally, it is against the law for any federal agency to take the cost of care into account when deciding whether to approve a new drug or medical procedure. The work of the group under Dr. Jack Wennberg at Dartmouth Medical School has demonstrated repeatedly that, as a result, the United States wastes billions of dollars each year for care that is worthless or close to worthless.<sup>1</sup>

Where is all of this increased spending going to lead us? Well, you have heard the numbers. Health care expenditures as a percentage of GDP flattened out in the 1990s. But since 2000, health care spending has been growing rapidly; and today, it is over 16 percent. According to the

most recent estimates, the growth in health care spending will continue to exceed the growth in the national income; and by 2014, it is likely to reach 18 percent of GDP.

Somebody said that we in the United States should never compare ourselves with other countries in the world. However, there is a lot of discussion about how much more we spend on health care than any other country, even in comparison with our higher GDP. But we are very sophisticated in rationalizing this disparity. It has been argued that simply comparing the share of GDP devoted to health care in each country is not the right way to analyze international differences. We should recognize that health care is a positive good; and, therefore, it is appropriate that as a country’s GDP grows, it should spend a greater proportion of its income on health care. But even when you correlate per capita spending on health care and per capita GDP, as shown in Figure 7.1, the United States is still spending substantially more than the rate that would correlate with our per capita income. In other words, we would have to reduce our spending by over 30 percent in order to be similar to other industrialized countries in terms of per capita spending on health care.

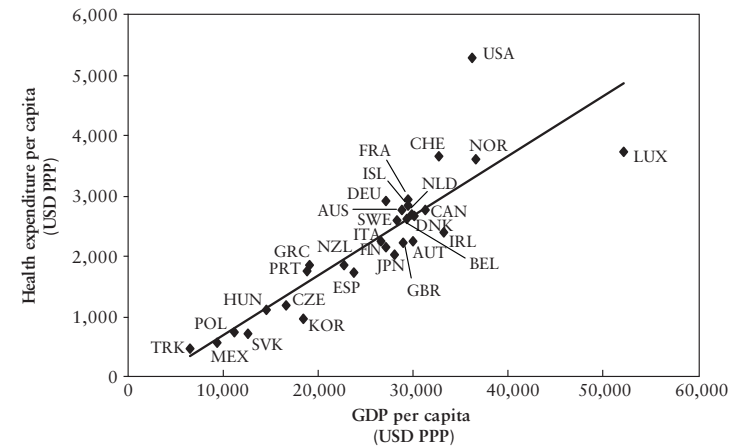


Figure 7.1 International Comparison of per Capita Spending: Health Care versus GDP Source: OECD, 2002.

What is fascinating about this international comparison is that other countries are using exactly the same language about their health care systems that we are using about ours. I cannot go to another country—for example, Australia, Germany, France, or South Africa—where they do not claim that they are spending too much money on health care. If you look at Germany in comparison with that line, they are about as high above it as we are. Of course, they are at a different point. So, there is something we can learn from other countries. It is that we are *all* messed up. And for very good reason: the pressure to want *more* exists in all countries. The sobering difference between the United States and most other countries is that their health care spending rates include full coverage for all their citizens. In contrast, about 16 percent of the American population under age 65 still has no health care coverage—which is not what one would expect in the world's richest nation.

Everyone at the conference has raised the issue of whether the United States will be willing to continue to increase the proportion of its national output spent on health care. While I agree with David Cutler—that we are not going to cut back substantially on health care spending in the United States—I do believe that it will be imperative to control the growth of these costs in the future. This will necessitate some changes to the current delivery system.

I happen to be a believer in the employer-based health insurance system, with all of its warts. It is a uniquely American system, complex as it is, and one with roots in the free market. In my mind, the only viable alternative to an employer-based system is a single-payer system. All of the other ideas for developing universal health care coverage—such as reversible tax credits, or a mandate that all individuals purchase private coverage, or a federal subsidy combined with a voluntary system—sound nice, but these solutions could ultimately lead to an increase in the number of uninsured Americans. The reason is that we will not be willing to raise taxes enough to substitute for the loss of the employer contributions, thus leaving individuals to buy insurance in the private market with no, or little, government subsidy. We would also lose the employer-based system's advantages of administrative efficiency and benefits pooling. Of course, in theory there are ways to fix the problems involved in

providing universal coverage, but I think that as a practical matter, we as a nation would not surmount these difficulties.

So, I believe that the United States can and should build upon the existing combination of employer-based health insurance for working Americans, and should also expand the Medicaid program for the poor, as well as the Medicare system for our older population. I would not be against lowering the age of eligibility for Medicare coverage to those aged 60 years and older. For those people who are not working, this change would have major benefits, and it would help to lower the cost of health insurance for employers that provide coverage. An enhanced combination of the employer-based system and government health care programs could result in the United States' effectively having universal coverage for all Americans. Unfortunately, our current employer-based private insurance system is cracking badly. You can look at the numbers between 2000 and 2005: the percentage of working Americans with employer-provided health care coverage has fallen from 65 percent to 59 percent. Were it not for the growth in Medicaid, the number of uninsured Americans would have increased even further. Thank you, Alan Weil, for caring about this issue. It is a particularly serious problem when you see that for small firms, the drop in coverage was even much higher.

We may well develop something that is a cross between a single-payer system and an employer-based system; but to really bring about health care coverage for everyone in the United States, we must make participation in the system mandatory. I have suggested having the federal government help to lower employer-based insurance premiums, by helping to pay for the most expensive patients with a high case cost reinsurance system. If we do not help the employer-based system by lowering premiums soon, we could see it just disintegrate. Look at what is going on at General Motors and the other auto makers. The CEOs from all the U.S. automobile manufacturers took the unprecedented step of going to see President George W. Bush and asking for federal help in paying for the health insurance costs of auto workers. Ironically, instead of helping them, in his 2007 State of the Union address President Bush suggested that workers at companies like General Motors who have very good health insurance coverage should pay an extra tax. Bush's proposal, in my opinion, is not a viable solution.

What is going to happen if the employer-based system continues to deteriorate and, as a result, the number of uninsured Americans increases substantially? If these newly uninsured workers need health care, either they will become part of the uncompensated cost system that is indirectly supported by a hidden tax on those of us who are insured, or they will join the rolls of those covered by government through the Medicaid program. If the latter happens, how will we pay for this expanded program? There are some in the economics community who believe that we cannot raise government taxes. It seems to have become the equivalent of the eleventh commandment: God decreed that the tax rate ceiling in the United States cannot be more than 18 percent or 19 percent of its national income. I have been looking for that eleventh commandment in the scriptures. I have not found it yet. But given the verve with which I hear such assertions, it must exist somewhere. I will keep looking. I must admit that I do not believe in the eleventh commandment nor do I think that most Americans do either. At the end of the day, when Americans are asked, “Do you want to maintain Social Security, Medicare, and Medicaid in their present form, or see them forced to stay within existing revenue (tax rate) constraints?” I believe this country will support raising taxes. But Americans will also question whether all the procedures and services we now, or will, provide are truly necessary.

With that said, I do believe that in the future we will have a problem financing our governmental programs, and, yes, we will need to make changes in these programs that will both rein in spending to some extent and ask wealthier seniors to pay more for their coverage. But I also believe that we will find new money to help sustain the overall mission of these programs. Some believe we can solve our Medicare financing problem by raising the age of eligibility (currently, persons aged 65 years and older are eligible). I am afraid this change will not save the program much money, and will add more problems for those people who retire at age 65 and are no longer covered by employer-provided private insurance. Fortunately, most 65-year-old Americans are relatively healthy. Hence, unlike delaying Social Security benefits, eliminating three or even five years of Medicare coverage will not yield commensurate benefits in terms of cost savings. For the sake of argument, if you want to save the

Medicare program money, eliminate eligibility for those individuals between the ages of 75 and 80. (I do not endorse this solution.)

We now require seniors with individual incomes over \$80,000 to pay more for Medicare Part B (physician and other outpatient care) coverage. While this new policy requirement does add some additional funds to the Medicare pool, do not count on it to solve the program’s long-run fiscal problems. Nor is there enough “gold in them thar hills” to solve all of Medicare’s future financial problems. While there clearly are a number of senior citizens with substantial wealth, the average per capita income of Americans over age 65 is less than \$30,000.

Since Medicare began in 1966, the federal government has avoided placing significant restrictions on government payments for health care; to a lesser extent, this is also true for Medicaid. But as the escalating trend in health care costs continues and a larger share of the population becomes eligible for Medicare, I think this will change. These restrictions on government payment and use will have a growing impact on our health system, since, sometime around 2010 when the baby boomers start to retire, more than 50 percent of all health care spending in the United States will come from state and federal governments. This will be true even if there are no further expansions in these programs. What impact will our allocating a larger share of public funds to health care spending have on the health care delivery system?

To begin addressing this question, let me change the subject a bit and focus on the potential long-term impact of technology on health care spending. The key question in my mind is, what will be the influence of technological change on the health care demands of the baby boomers? When I started calling the boomers “the Bill Clinton generation” a few years ago, I did not realize that I was putting a hex on him and that he would wind up having open-heart surgery so quickly. But Clinton is my model of the impact that technology will have on the baby boomers’ health care spending.

So what are the baby boomers going to want as they reach retirement age and become eligible for Medicare? Are the new technological advances going to result in cumulative cost increases in the way that previous advances have done, or is technology going to result in more effective preventive medicine that eliminates the need for more costly procedures?

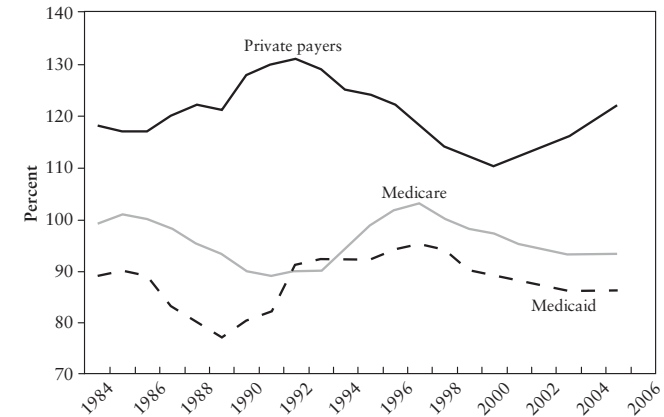
We have seen a lot of what we call “cumulative medical technologies” building on top of one another, as opposed to putting a greater emphasis upon effective technologies that limit spending. It is not clear whether prices have gone down for these newer technologies, but the quantity surely has gone up. Paul Ginsberg wrote about this issue a couple of years ago (Strunk and Ginsberg 2002), and since then we have had an ongoing discussion. Ginsberg believes that during old age, the boomer generation will not use that much more health care than it does now; rather, it is going to be a healthier generation in its elder years than previous generations and one that will therefore need less care. Perhaps the average baby boomer is going to live to, say 85, then find a nice comfortable place and cease to exist, costing the Medicare program nothing.

Maybe this prognosis is correct. But a few years ago, my colleague David Shactman and I played around with some numbers. We looked at the spending pattern on health care by age cohort from 1987 to 1997—at that point the baby boomers were between 31 and 50 years old—and we found that, aside from the neonates, the fastest spending growth among the different age groups was among the boomer age group, particularly when you add in spending on prescription drugs.

Among the boomer generation, by far the fastest-growing expenditure category is prescription drugs. It is not the highest one, but it is growing the most rapidly. There is a reason why the drug companies make sure that many of their commercials are aimed right at the baby boomer generation. The reality is that the boomers are big spenders, and I see nothing that is going to stop this trend as they enter their golden years.

It is now well known and supported by most analysts that hospitals “cost-shift” to other payers when the government reimburses them for less than the costs they incur or when they provide free care to the uninsured. Maybe this is not a dollar-for-dollar adjustment, but wherever possible, they do shift a substantial proportion of the costs that are not fully reimbursed. You can see this relationship in Figure 7.2. If you look back to the early 1990s, the average private payment-to-cost ratio in hospitals was about 130 percent.

In other words, privately insured patients were being charged 30 percent more than the cost of their own care, while at the same time



**Figure 7.2**  
Hospital Payment-to-Cost Ratios  
Source: The American Hospital Association’s Annual Survey of Hospitals.

hospitals were losing between 10 and 20 percent when treating Medicare and Medicaid patients. As we moved into the mid-1990s, all this changed. Medicare and Medicaid payment-to-cost ratios rose while the ratios for private insurance groups fell. I remember hearing all of the managed care industry’s bravado about how successful they were in beating up on hospitals. Little did these cheerleaders know that the hospitals were not as concerned about receiving lower payments from the managed care industry, because Medicare and Medicaid were actually paying pretty well at the time. But that halcyon era ended after Congress passed the Balanced Budget Act of 1997. After 1999, we were back to a period where government payments became low relative to the cost of providing care, and hospitals worked hard to extract higher payments from their privately insured patients. As a result, the private payers’ payment-to-cost ratio has risen in the last couple of years from 112 percent to around 120 percent (see Figure 7.2).

Given that the future proportion of hospital patient expenses incurred by Medicare recipients will be higher because of the demographic trends we have been discussing, suppose hospitals want to maintain the same margins in 2025 as they earned in 2003. What would the privately

insured payment-to-cost ratio have to be in 2025? Of course, this is a hypothetical exercise, but I think it highlights the financial pressures that hospitals and private insurance companies will face in the future. Stated differently, in order for the hospitals of 2025 to maintain their margins, given their future cost structure and the changing demographics of their patient mix, private hospital payments relative to costs will have to rise to unprecedented levels. If this does not happen, there will have to be big changes in the way hospitals do business or a significant reduction in the utilization of hospital care by all patients, particularly those covered by government programs.

Other countries have restricted their growth in health care spending. How have they done it? It does not just happen. The way they do it is by keeping people from getting access to expensive medical technology that has limited benefits. But not everyone believes that making medical decisions based strictly on the cost-benefit ratio is a good thing. What about the elderly patient who could live a few years longer, but would need a very expensive procedure to do so? I will want access to that technology when I need it. I believe the baby boomers will want it as well.

In the United States, we have this pressure to provide and pay for the health care gold standard, which means doing everything you can for a patient, regardless of whether the benefits are at all commensurate with the cost of the treatment. That is what health care providers are trained to do, what patients expect, and what the present system has paid for providing. In fact, there is growing evidence that in some parts of the country the situation is even worse—the health system is providing care that is actually harmful, and we’re doing too much. Dr. Jack Wennberg at Dartmouth Medical School has been studying this issue for over 20 years; you can review his findings, so I won’t belabor the point, except to suggest that there must be a happy medium between a strict cost-benefit system of rationing health care and a system that spares no expense and covers every possible procedure.

But we cannot adopt the purely market-oriented solution of opting for insurance policies with very high co-payments and limits on coverage. If we do this, there will be some winners but also some big losers. Who would be the winners? Clearly, healthy individuals: they will pay lower prices. Adopting the purely market-oriented solution would also help

those owners and workers who either operate truly efficient health care institutions or who “cherry-pick” only the most profitable patients.

Who would be the losers? Sick patients who have complex illnesses. No provider or insurer wants expensive patients who incur costs that are higher than their covered payments—such as burn patients, psychiatric cases, or chronic medical conditions. The uninsured would lose out, as well as Medicaid recipients and long-term workers in big, expensive systems. Finally, the many public health services provided to communities at no cost, or at prices below cost, would be hurt. A purely market-oriented solution might be efficient, but it would not be equitable. Americans are increasingly aware that the current system is approaching the breaking point, and the issue of how to deal with health care promises to figure into the 2008 presidential election.

So then, the real question must be: Are there market alternatives to this unpalatable scenario of greater demand and higher costs? I say that the answer is yes. There are four distinctly private-sector forces that could help to reduce private spending levels and keep the United States’ employer-based health insurance system from breaking. As I said previously, I believe that if we abandon employer-based insurance, we will face a serious coverage and financing problem, followed by the implementation of some form of a single-payer system that, I suspect, would provide lower-quality health care services. From my point of view, I would rather not see this country move in that direction. Therefore, I think we need to make the employer-based system work by: (1) changing the design of the employer-based insurance system to encourage greater consumer involvement in managing costs, (2) returning to a true “managed care” system, (3) altering provider payments to reward efficiently provided care by paying for performance, and (4) creating an effective, systemwide, high-cost disease management system. We need to change the design of employer-based insurance and incorporate greater consumer involvement. Whether we call these measures health savings accounts, high deductibles, or co-insurance, the forces will have a positive impact on improving the country’s current health care system.

In my view, we need to return to managed care. We ought to believe in managing health care in order to manage health care costs. The reality is that managed care is a good thing if it truly manages care and does

not just cut payments without due regard to the value of the services provided. We should be paying health care providers for performance, not just paying them, period. Incentives matter. Finally, we can pursue Willy Sutton's idea—he was the bank robber who said to go where the money is. We can stop concentrating on saving nickels and dimes and see whether we can better control the spending for those patients who cost the system the most—the very sick. Saving money by controlling the cost of caring for the very sick is one way to avoid breaking the bank by allowing health care costs to spiral out of control.

But, at the end of the day, I am with Mark Pauly. Private-sector solutions are all good things, but they are not going to fundamentally change the long-term cost curves of providing health care in the United States, especially as the baby boom generation enters old age. Private-sector solutions are just not strong enough to trigger meaningful incentives to contain rising costs. This brings us full circle to my opening point: I no longer believe that private market forces alone will suffice to improve health care coverage and contain the rising trend of greater costs, but they can be helpful. In the end, we also need government to help guide the system to become more effective, by providing the information necessary to help patients and providers know which services do and don't work. We also need government to stop paying for services that really have little or no benefit.

At some point, we must introduce more aggressive changes in utilization that bring both providers and government into the action. We cannot just rely on forcing patients to bear more and more of the cost of their care. Making these changes will not be easy, and right now I do not see that the United States has the political will to seriously confront such changes. Health care promises to be a topic in the 2008 presidential election, but the difference between debating an issue and taking concrete action is considerable. Nor, at present, do I see a broad willingness on the part of business or government to eliminate coverage. Therefore, at least in the short term, I see spending and medical care premiums continuing to grow at rates significantly faster than the growth in GDP. Government may try to slow its spending on medical services, but it, too, is being pulled along by the public will to provide health care at all costs, not to curtail its provision.

Americans care about equity, and I believe that they will support higher spending if they feel that the money is well spent. But sooner rather than later, we need to have a serious national debate about how the private sector and the public sector can balance the cost of providing health care for everyone in the United States. This is a worthy goal for our nation, both economically and politically. I believe that there are efficient and equitable solutions if we have the will to confront the health care challenge of providing high-quality medical care while controlling costs.

#### Notes

1. See the work of the Center for the Evaluative Clinical Sciences at <http://www.dartmouth.edu/~cecs/>. Accessed October 9, 2007.

#### References

- Strunk, B. C. and P. B. Ginsberg. 2002. Aging plays a limited role in health care cost trends. Data Bulletin, Center for Studying Health System Change.

---

## Comments on Altman’s “Will the United States Continue to Allocate a Growing Proportion of Its GDP to Health Care?”

Judith Feder

Stuart Altman has laid out a full range of concerns about rising health care costs. I will focus my comments on the tie of health care costs to health care access—or, to be more precise—to health insurance coverage. My argument, in brief, is that, although uninsurance does not begin with health care costs, cost increases undermine the capacity or willingness of our public and private financial institutions to assure access to coverage; and, that (like it or not), deterioration in private and public coverage actually constitutes a cost containment strategy—one of growing inequity between haves and have-nots. The argument has five points.

The first point is to remind us that the primary barrier to health insurance coverage is not costs; it’s income. An estimated one-half to two-thirds of the uninsured (depending on how we measure income) have incomes below twice the federal poverty level. The uninsured are in low-wage, low-benefit jobs, most of which do not offer health insurance; and the direct price they face for health insurance policies in the nongroup market—in conjunction with these policies’ limited benefits—exceeds their willingness or, in my view, their ability to pay. That means that it is subsidies, not cost containment, that are needed to expand coverage.

That takes me to my second point: that cost increases for the insured have, for decades, been a major political barrier to providing subsidies.

- Supporters believed Medicare to be the first step toward national health insurance; but early after its passage, forward movement was derailed, not only by partisan politics, but also by Medicare’s rapid cost increases.

- The Carter administration, ostensibly committed to universal coverage, put cost containment first. They never got that, and they never got to coverage.
- The Clinton administration tried to finance coverage with cost containment, and they, too, got neither.

Essentially, over about the last 50 years, the uninsured minority have been held hostage to our unwillingness or inability to slow cost growth for the already-insured majority.

Point three: Cost growth is increasing the numbers of people without health insurance and eroding the benefits (or consuming the wages) of many of the insured. Although income is the primary barrier to insurance coverage for modest-income people, at the margin, higher health care costs (especially in a weak labor market) mean fewer people covered and, for those who are covered, fewer benefits or lower wages, as health care costs consume a growing share of compensation. That means we have a problem not only with the sustainability, but also with the regressivity of our current health financing mechanisms. And, whether through deterioration in benefits or in disposable income, it means we have a de facto strategy for dealing with costs: increasing inequity between high- and low-income people.

Point four: There is a powerful likelihood that this de facto strategy will become de jure. Concern about health care costs in the political arena is largely framed as a problem with our “entitlement” programs and deemed to create a need for “entitlement reform.” The target is not health care costs in general, nor is it our tax entitlements (most significantly the tax preference for employer-paid premiums); rather, it is our direct spending on Medicare and Medicaid. And the goal is not to reduce health care cost growth, but to cut public subsidies for these costs. Stuart raised Medicare financing as the first issue around which the Congress will confront this strategy, as general revenue contributions reach the Medicare Modernization Act’s newly created “cap.” But the strategy’s first phase is to target Medicaid—the most politically vulnerable program, where, at the very moment of this conference, the nation’s governors are calling on Congress for “flexibility” to increase cost sharing, cut benefits, and eliminate judicial remedies that enforce Medicaid’s individual



entitlement. Alongside cuts in private-sector protection may well come cuts in public-sector protection for the low-income pregnant women and children we have so far deemed deserving.

And that takes me to my fifth and final point—that in all likelihood, the “strategy” of increased inequity in response to increased costs will continue. The “haves” will get more; the “have-lesses” and the “have-nots” will get less. And it will all happen without explicit consideration of what we, as a nation, can actually afford. As I have understood David Cutler and others (including participants in this conference), GDP growth can support a more equitable and even a growing health care system. We have policy choices, not immutable laws, about the share of that growth we wish to use for our collective good. And we can choose, like other nations, to promote efficiency and devote less to administrative costs, as well as use care more effectively to stretch those funds.

But the policy path we have followed obscures rather than facilitates explicit choices. Our public/private financing system, which some have properly called “fragmented,” is not, as others have claimed, a “historical accident.” It is the outcome of a century’s worth of political choices and testimony to the stakes and values that reinforce and sustain them. Paths can change, but, at present, it certainly seems that our politics are entrenching, not reversing, the inequitable path we are on.

---

## The Need for Managed Incentives: Comments on Altman’s “Will the United States Continue to Allocate a Growing Proportion of Its GDP to Health Care?”

David O. Meltzer, M.D.

Dr. Altman asks whether and how the United States will contain its health care expenditures in future years. He argues that we will have no choice but to do so, and that a consumer-responsible system will likely play a major role in this transformation. He concludes with the remark that physicians will decide the shape and structure of this new system. As the physician among his discussants, I will respond to this last point and discuss examples, both positive and negative, of physician engagement in health care cost control efforts. I believe these show both the promise and challenge of physician leadership in this area. I will also discuss what I think is the failure to this point of physician engagement with patients around cost control, as I think this is a major concern with consumer-driven models for controlling health care costs that has received little attention. And finally, in discussing both of these issues of physician engagement in cost control efforts, I will try to suggest some ways in which I think health economics as a discipline has fallen short of realizing its promise to produce a more effective and efficient health care system.

Let me start by saying that I am not sure to what extent physicians will be leaders in this process. Surely, they will play an important role, but there are powerful forces, both economic and social, that may prevent doctors from exercising the leadership one might have expected in a previous era. The immense economic burden of modern health care and the deteriorating professional authority of physicians are just two of these forces. But this said, let me touch on two areas where I think the involvement of physicians will be increasingly critical: hospital care and ambulatory care. In these two areas, one sees quite different patterns of physician awareness and involvement in the economics of health care.

As an economist, I think these are not random, but rather the results of the incentives we have created for doctors. In both cases, I think there is a clear lesson: doctors will follow the incentives they are given, but often not as quickly as we might hope they would. My key message will be that, as economists, we need to spend more time thinking about the things we can do along with incentives—for example, offering provider and patient education—to make incentives more effective. In short, we need to better manage incentives by understanding the organizational and human contexts in which they are applied.

In hospital care, which Dr. Altman notes continues to be the largest single contributor to increases in health care costs, a remarkable transformation is taking place in the United States. Specifically, hospital care is being taken over by a much smaller number of physicians than previously practiced in this setting—a group of physicians who are more focused on containing costs than were those they are replacing. One sees this most dramatically in internal medicine, where a new group of specialists called “hospitalists” have taken over more than one-third of all hospital general medical care in the United States only seven years after the term “hospitalist” was defined. Although the data are not unequivocal, there are suggestions that replacing traditional internists focused on ambulatory care with hospitalists can reduce the cost of hospital care by about 10 percent, while maintaining or improving outcomes. Furthermore, our data suggest that hospitalists are doing this while providing care that is technically better. For example, in the care of community-acquired pneumonia, we have found that hospitalists are more likely than traditional internists to follow guidelines for the appropriate timing of discharge relative to clinical stability, reducing the length of stay by discharging more people at the time of clinical stability rather than later, and, at the same time, discharging fewer patients before they are clinically stable. In the language of economists, these doctors are operating closer to the production possibility frontier.

Moreover, recent research by myself and others suggests that these doctors appear not only to improve the cost and outcomes of the patients they care for, but also to improve the care provided by the other doctors with whom they work, whether they are young doctors in training or older colleagues who likewise pick up the practices of the hospitalists. A

great example of this is work that we have done examining the adoption of low-molecular-weight heparin, a blood thinner used to stabilize and dissolve dangerous blood clots that used to require hospitalization of a week or more and now are often treated with this new drug in an overnight hospital stay. At our hospital, the use of this drug began with one of our hospitalists, who saw an opportunity to reduce length of stay and costs for our hospital, while providing care that was as good or better for his patients than the conventional care. Seeing that his job as a hospitalist called for him to seek out and implement changes such as these, he worked out the logistics of using this treatment at our institution and began to use it. But the story did not end there; soon the interns and residents with whom he had used the drug began to use it for the patients who appeared on their service the following month with a new attending physician, and these physicians in turn began to use it and teach it to other interns, residents, and attending physicians. Our data allow us to trace out this learning from person to person until about two or three years later, when the treatment became standard in our hospital. We have also found that the hospitalists make the whole system run more efficiently by addressing systems problems they see, and probably by encouraging physicians who are not as effective in the inpatient setting to direct their activities elsewhere. Hospitalists are also having increasing effects outside of internal medicine, in both subspecialty and co-management models, for example, in providing hospital care for post-operative orthopedic patients. The aggregate cost implications of these effects are not small. If hospital care represents 40 percent of health care expenditures, and if hospitalists can reduce hospital spending by 10 percent, then we are talking about saving potentially 4 percent of health care expenditures, or in Fed terms, one-half percent of GDP. For the United States, that would be \$60 billion annually. For General Electric's \$3 billion annual health care bill, maybe \$120 million per year. Even if the actual savings were a fraction of these, the savings from hospitalists could clearly be substantial.

But my point is not to tell you that hospitalists are a cure-all. In fact, I am known by people who study hospitalists as somewhat of a skeptic, but I think the example is important because several lessons emerge from it. First, doctors can respond to incentives, even when they are somewhat indirect. The pay of our hospitalist who pioneered the use of low-

molecular-weight heparin was not directly tied to saving the hospital money, but he had an understanding that, as someone supported by the hospital as a hospitalist, his role included the general responsibility to contain costs. Note that this understanding contrasts with that of typical medical school doctors, who report to their division chiefs, department chairs, and deans, most of whom care little whether the hospital runs efficiently. While, in principle, the hospital vice president in charge of utilization could have told the hospital president to tell the dean to tell the medical department chair to tell the division chief to tell the attending physician to try to think up ways to save money and then thank him or her for successful innovation, it goes without saying that such complex transmissions of incentives rarely happen, if for no other reason than because of the sheer number of links in the chain. The scope for misunderstanding and information loss is compounded by the complexity and dynamic changes in the links when leaders frequently stay in their jobs for only a few years in modern medicine.

The particulars aside, the point here is that doctors can respond to incentives, but that the complexity of medical institutions often makes it very, very difficult to ensure that such responses occur in a timely fashion. In hospital care, I think it is telling that since the establishment of the Medicare prospective payment system (PPS) more than 20 years ago, the incentives have been aligned for more efficient care for the vast majority of hospitalized patients, but only now are we seeing medical specialties like hospital medicine arising that make it their business to address the inefficiencies of hospital care. If you go to the hospital medicine meetings, I think you will be excited to see sessions on quality improvement methods, such as process mapping, measuring outcomes, the use of new technologies to improve efficiency, and so on. Doctors who attend these sessions are gaining the skills needed to respond to the incentives that have been created. This is all great, and it gives me faith that this is a discipline that will grow to make real contributions to improving the cost and outcomes of the health care system, but I think it is well worth noting that it is arising 20 years after the fundamental change in incentives created by Medicare prospective payment, which I believe, more than anything else, set it in motion.

So, to me, the lesson here is that it is not enough to change incentives alone unless we are prepared to wait a very, very long time for a response. We also need to create the institutional environment to be sure that the incentives are transmitted to the persons who are in a position to act on them, and provide these persons with the skills needed to respond to them. I think this problem is perhaps most evident in academic medical centers, but it is also present in most community hospitals. Alain Enthoven's integrated health systems have been leaders in these approaches, so perhaps those who have been keeping score should have given him credit for that. However, I think that fully integrated systems may not be required. I believe that if hospitals were more frequently managed by leaders who understood how to create the partnerships needed between hospitals and physicians, and that if physicians were trained from their earliest days in the skills needed to accomplish the changes in the system required to improve health care, we would not have had to wait 20 years after PPS to see these changes taking place. The point is that the creation of new incentives needs management, and there is a critical dearth of qualified leaders to manage health care intelligently in this country. If we had implemented PPS and had trained hospitals and doctors more actively in how best to respond to these new incentives, I suspect that we would have achieved greater savings and better outcomes, and we would have developed disciplines like hospital medicine far sooner than we did. If one is a theoretically oriented economist, one can tell stories about why it would have made sense for hospitals to invest in producing these skills in their physician leaders 20 years ago, but the fact is that they did not, and still do so reluctantly. One reason may be that these skills are largely general human capital, which employers are understandably reluctant to invest in; and for physicians, these are not skills that one easily learns in the classroom or that are so trivially mobile across institutions as to be worth investing in themselves.

But, regardless, the point is that we could have done, and can do, much more to spread skills in system change—skills like root-cause analysis, failure mode-effect analysis, continuous quality improvement, process mapping, and so on. If a challenge of pay for performance (P4P) based on outcomes is patient selection, so that P4P based on structural or process

measures of care makes sense, why not help pay for physician training in quality improvement and for physician time allocated to quality improvement efforts? Rather than waiting 20 years for the forces of the invisible hand created through managed competition to nudge hospitals and physicians towards efficient practices, it seems to me better in working with institutions as complex as those in health care to manage the response to incentives more directly. I think the best plan for health care reform cannot be determined from an elevation of 30,000 feet, and economists have had less impact than they might have had because they have too rarely thought about how the incentives that they propose play out at the micro level. I think that we need to learn not only to create incentives, but also to manage them by creating needed co-interventions, such as physician training, so that their impact is realized more effectively.

The second area I wish to discuss, ambulatory care, also illustrates well the importance of economists' not thinking they can understand, no less re-engineer, the health care system from 30,000 feet, but instead investing more effort in this sort of managed incentivization. Discussing ambulatory care is an interesting complement to the discussion of hospital care, because unlike hospital care, which is largely paid for by payers, ambulatory care often has substantial out-of-pocket components that have been created to control utilization.

If any single area has been the focus of health economists, it is the effect of co-payments on the demand for medical care, but I think our conceptual model of how co-payments affect demand remain tremendously primitive. The model essentially is that we vary the price of some aspect of health care, and people decide whether it is worthwhile at that price and make their decisions accordingly, based on a comparison of benefits to costs. But this is not how health care works, and especially if you are not someone who is wealthy and therefore indifferent to costs or are not educated enough to inform yourself. Basically, you get 10 to 20 minutes with your doctor, who talks with you briefly about your health concerns and then tells you what to do and sends you on your way. There is no time to ask many questions about the magnitude of benefits or about alternatives, even if you were self-possessed enough to do so; and if you did ask about cost, it is not clear the physician would know the answer to your question.

In an article that colleagues and I recently published in the *Journal of the American Medical Association* (JAMA), we found that about three-quarters of doctors and patients agreed that they should discuss out-of-pocket costs, but two-thirds of doctors and 85 percent of patients said they had *never* discussed out-of-pocket costs with each other (Alexander, Casalino, and Meltzer 2003). With such statistics, I am frankly amazed that a price elasticity of demand for care is even measurable in health care. But more pragmatically, I cannot help but think that the elasticity of demand would be much different if we could shift the culture to put issues of cost on the table in the encounter between doctors and patients. There are many ways to do this: empowering patients, simplifying benefit structures to be more transparent, and educating or incentivizing doctors to discuss these issues with their patients. How can we expect co-payments to have their full effect on demand if people do not even know about them at the time they are making the decision to go ahead? We get all the financial risk that comes with incomplete coverage, while failing to realize the potential to constrain expenditures appropriately.

Again, as economists we have worked at 30,000 feet and have not managed the human relationships around the incentives that we have created. The fields of psychology, sociology, communication, marketing, and graphic design, as well as human factors, can all contribute here. And perhaps we need the attention of medical educators and even some legislation to ensure that doctors act with basic economic competence in discussing issues of cost with their patients. To me, this sort of attention to the institutional and interpersonal context by which incentives are transmitted is the frontier of health economics.

Concluding, I think that health economics needs to move from merely creating incentives to considering how to manage those incentives in the context of the complexities of health care. Whether it is by helping doctors and hospitals gain the skills they need to respond effectively to prospective payment incentives or by providing patients and doctors with the skills they need to manage out-of-pocket costs, we need to think about how incentives are complemented by noneconomic approaches, such as educating and motivating patients and providers to make changes in response to those incentives. In that regard, it is exciting that so many economists here work in interdisciplinary settings or have developed link-

ages with one or more provider systems. But I think that there is still a great deal of unexploited opportunity to improve health care by bringing interdisciplinary insights into mainstream health economics, and I imagine a conference like this even 10 years from now would find people from an even broader set of disciplines than the diverse set we see here today.

## References

Alexander, G. C., L. P. Casalino, and D. O. Meltzer. 2003. Patient-physician communication about out-of-pocket costs. *Journal of the American Medical Association* 290: 953–958.

---

## Comments on Altman's "Will the United States Continue to Allocate a Growing Proportion of Its GDP to Health Care?"

Joseph P. Newhouse

Stuart Altman covers a lot of ground in his paper, and it would be easy to be equally lengthy in commenting on it. But I will limit my comments to three topics: (1) the medical cost paradox, namely, that the increment in benefits from increased medical care spending over time has exceeded the increment in cost, even though at a point in time the marginal benefit of additional spending is less than the marginal cost; (2) the consequences of increasing medical care cost for the financing of Medicare, Medicaid, and the safety net; and (3) the consequences of the increasing cost for employment-based health insurance.

### The Medical Cost Paradox

Altman points out that physicians who are reimbursed on a fee-for-service basis, as most American physicians are, have a financial incentive to deliver all or almost all services with a positive marginal benefit. Medical training and culture reinforce this. So do insured patients, who want all services that they believe have a positive marginal benefit. In short, the financial incentives suggest that the marginal dollar spent on medical care should not buy very much.

There is much evidence to support this suggestion. Within the United States, Altman points to the studies of Elliott Fisher, Jack Wennberg, and their colleagues at Dartmouth Medical School. The Dartmouth group has made a strong case that high spending areas in the United States receive little or nothing in the way of observable benefit from their extra spending (Dartmouth Medical School 1999; Fisher et al. 2003a, 2003b).

Reinforcing the notion that the United States does not get value for the money it spends are the numerous studies of deficiencies in the quality of care. They suggest that the American medical care system—and probably every other country's as well—operates well within the frontier of what is possible, given the resources it uses (Institute of Medicine 1999, 2001; McGlynn et al. 2003; Newhouse 2002).

At the same time, David Cutler, Mark McClellan, and I have made the case that the increase in medical spending over time has brought benefits that have exceeded the cost (Cutler 2004; Cutler, McClellan, and Newhouse 1999; Cutler and McClellan 2001; Newhouse 1992). Cutler has argued, persuasively in my view, that the benefits from improvements in the treatment of cardiovascular disease and neonatal mortality alone have been worth the entire increase in cost in the United States over the past few decades (Cutler 2004). In the case of cardiovascular disease, however, these gains appear attributable more to relatively inexpensive, low-tech treatment than to the well-known, high-tech, costly interventions such as bypass surgery and angioplasty (Cutler, McClellan, and Newhouse 1999).

Consistent with the view that, on average, the benefits of the increased share of resources going to medical care have been worth their cost is the similarity of the rate of real increase in medical cost across developed countries, despite those countries' varied financing institutions (Newhouse 1992). My interpretation is that all countries have found the costly new capabilities of medicine worth purchasing.

In sum, the last several decades have seen valuable but costly medical advances. Although no one can know the degree to which these advances will continue, it seems likely that they will, and that medical spending will continue to rise. As each country spends more, the strains on financing institutions will be ubiquitous, although the nature of those strains will differ, depending on the specifics of each country's institutions.

### The Strains on Public Financing of U.S. Medical Care

Virtually all observers believe the cost of medical care will continue to increase. As Altman points out, how Medicare will finance its share of the increasing cost is a major public policy issue. And it is not just Medicare that is at issue. Medicaid is an even larger program, and there is also

the cost of direct delivery systems financed by all levels of government. These include the Veterans Administration, the military health care system, and community health centers at the federal level, as well as state and local hospitals at lower levels of government. In FY 2006, medical care will account for around 25 percent of the federal budget, and Medicaid alone will account for over 20 percent of the average state budget (Congressional Budget Office 2005a; Mann and Pervez 2005).

The potential future rate of cost increase, together with the large budget share already accounted for by medical care, implies a substantial shift of resources to medical care in the future. With an assumption about the difference between the future growth of medical cost and the future growth of GDP, one can estimate just how substantial that shift might be. Historically (1960–2002), the annual increase in medical care cost in the United States exceeded GDP growth by 2.7 percentage points; the excess in France, Germany, and the United Kingdom was 2.5, 1.9, and 1.7 percentage points, respectively (Organisation for Economic Co-operation and Development 2004).

One can, of course, reasonably expect the excess growth to diminish because the opportunity cost of medical spending will increase as its share of GDP increases. As an illustration of the forces at play, if one assumes that U.S. medical spending increases by 2.0 percentage points above GDP for several decades, less than the historical U.S. rate, the increment in medical spending takes almost all of each year's increment in GDP by mid-century (Chernew, Hirth, and Cutler 2003).

Long before mid-century, however, the seemingly irresistible force of medical cost increases may meet something of an immovable object. American political institutions have kept the share of GDP taken by federal revenues remarkably constant. Only three times in the 58 years since the end of World War II have federal revenues as a share of GDP gone outside a band of 16 to 20 percent, and only once—in 2000, when revenues swelled from taxes on realized capital gains and exercised stock options did the share exceed 20 percent (Congressional Budget Office 2005b).

How strong a force will act on the apparent ceiling on the federal share of GDP? If access is not to be jeopardized for its beneficiaries, Medicare costs must increase at close to the same rate as private costs, as indeed they have historically (Newhouse 2004). The Medicare Trustees

assume that the annual per beneficiary cost of Medicare will increase by only 1 percentage point more than per capita GDP (The Boards of Trustees 2005). Although the historical difference between medical care cost growth and GDP growth will likely shrink because of the increased opportunity cost, I regard the Trustees' assumption as decidedly optimistic. It is well below what any developed country, let alone the United States, has achieved over a sustained period. Even this optimistic assumption, however, shifts around 3 percentage points of GDP to Medicare over the next two decades (Congressional Budget Office 2003). But given the striking constancy of the federal share of GDP, shifting 3 percentage points of that share to Medicare will create strains, not to mention the additional resources that Medicaid, including long-term care, and Social Security will require over the next few decades.

### **The Strains on Financing Medical Care Through Employment-Based Insurance**

Altman characterizes the employment-based system as “crumbling” and backs that description with numbers on how employment-based insurance has shrunk over the last few years.

I agree with Altman that there is likely to be continued shrinking because of the pressure placed on cash wages by the steady rise in medical costs. An example will illustrate: the 2005 premium for my HMO policy through Harvard University, which covers my wife and me, is over \$14,000 per year. Dental insurance brings the total to roughly \$16,000. An employer paying 75 percent of these costs would spend \$12,000.

Consider an employee with such a policy, earning \$35,000 of cash wages. The employer share of Old Age Survivors and Disability Insurance, Hospital Insurance (Medicare Part A), and Unemployment Insurance taxes is 8.5 percent of earnings, or \$3,400 for this worker. Suppose the employer also makes a 6 percent pension plan contribution, an additional \$2,400. The employer's share of the fringe cost, including health insurance, comes to \$17,800 (= \$12,000 + \$3,400 + \$2,400), just over half of cash wages; so total compensation is \$52,800.

Now project these numbers forward. Suppose medical care costs go up by 8 percent per year, and productivity and hence compensation go

up 3 percent. Assume that the tax rate for Medicare and Social Security does not increase, surely an optimistic assumption, and that the pension contribution remains at 6 percent. In 10 years, the total compensation of \$52,800 will have grown to \$70,959. The health insurance subsidy, however, will have more than doubled to \$25,907. As a result, cash wages will have only risen to \$36,065, or 0.3 percent per year. Modest changes in these numbers, including considering a lower-wage worker, yield a projection that cash wages would fall.

Thus, the pressure on cash wages creates special problems for low-wage workers. At the extreme of the minimum wage, the employer cannot shift the increases in insurance premiums. But as the foregoing example shows, shifting costs may run into problems well above the minimum wage if the employer does not wish to cut nominal wages. This is especially the case when increases in health care costs substantially outrun general inflation (Sommers 2005).

If costs cannot be fully shifted to low-wage workers, the employer can increase cost sharing, reduce covered services, or decrease the premium subsidy. Clearly, employers are utilizing all of these strategies. And sufficient decreases in the premium subsidy could effectively negate the risk pooling that the firm provides, as good risks opt out; that is, such decreases in the subsidy could effectively wipe out employment-based insurance.

Another option for the employer is to redistribute more within the workgroup; that is, to have high-wage workers subsidize low-wage workers to a greater degree. But this disadvantages employers with a relatively high share of low-wage workers when competing in the labor market for high-wage workers. Rather than redistribute, the employer may contract out for services provided by low-wage workers, either to independent contractors or to firms that hire low-wage workers but do not provide health insurance. In turn, such workers shift to a spouse's insurance, to the individual insurance market, or to safety-net institutions. The latter development, of course, places further stress on public budgets and increases the political pressure for universal coverage.

Ironically, increases in the minimum wage exacerbate the problem. Colin Baker has shown that about half of the 4 percentage point decline in those insured through their employer during the 1987–1999 period

was attributable to increases in the minimum wage, especially the \$1.80 increase in the federal minimum wage (Baker 2005). And an employer's pulling insurance off the table entirely is clearly the extreme case; most likely many more employers increased the cost sharing, decreased covered services, decreased the subsidy to the premium, or used some combination of these approaches in response to the minimum wage increase.

### Will the Cost Increases Continue?

No one can say with any assurance what the increase in future medical costs will be, but the cost of medical care has been increasing faster than GDP for more than half a century in virtually every developed country, at least if one looks at sufficiently long time periods. The principal driver behind this increase has been the increased capabilities of medicine. It seems only reasonable to think that these capabilities will continue to increase, because many of them are highly valued. Still, as the opportunity cost increases, it also seems reasonable to think that the rate of increase will slow down. Just how fast it will slow down and how the financing institutions will accommodate to the increase is anyone's guess. But the safest bet would be for continued strain on financing institutions.

### References

- Baker, C. 2005. Minimum wage mandates and employer-sponsored health insurance. Ph.D. Dissertation, Harvard University.
- The Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. 2005. *2005 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Trust Funds*. Washington, DC: The Boards of Trustees.
- Chernew, M. E., R. A. Hirth, and D. M. Cutler. 2003. Increased spending on health care: How much can the United States afford? *Health Affairs* 22 (4): 15–25.
- Congressional Budget Office. 2003. *The Long-Term Budget Outlook*. Washington, DC: U.S. Congressional Budget Office.
- Congressional Budget Office. 2005a. March 2005 baseline budget. <http://www.cbo.gov/showdoc.cfm?index=1944&sequence=0#table6> (U.S. Congressional Budget Office). Accessed May 28, 2005.



- Congressional Budget Office. 2005b. *The Budget and Economic Outlook, Fiscal Years 2006 to 2015*. Washington, DC: U.S. Congressional Budget Office.
- Cutler, D. M. (ed.). 2004. *Your Money or Your Life: Strong Medicine for America's Health Care System*. New York: Oxford University Press.
- Cutler, D. M. and M. McClellan. 2001. Is technological change in medicine worth it? *Health Affairs* 20 (5): 11–29.
- Cutler, D. M., M. McClellan, and J. P. Newhouse. 1999. The costs and benefits of intensive treatment for cardiovascular disease. In *Measuring the Prices of Medical Treatments*, edited by Jack Triplett. Washington, DC: The Brookings Institution.
- Dartmouth Medical School (ed.). 1999. *The Dartmouth Atlas of Health Care, 1999*. Chicago: AHA Press.
- Fisher, E. S., D. E. Wennberg, T. A. Stukel, D. J. Gottlieb, F. L. Lucas, and É. L. Pinder. 2003a. The implications of regional variations in Medicare spending. Part 1: The content, quality and accessibility of care. *Annals of Internal Medicine* 138 (4): 273–287.
- Fisher, E. S., D. E. Wennberg, T. A. Stukel, D. J. Gottlieb, F. L. Lucas, and É. L. Pinder. 2003b. The implications of regional variations in Medicare spending. Part 2: Health outcomes and satisfaction with care. *Annals of Internal Medicine* 138 (4): 288–298.
- Institute of Medicine (ed.). 1999. *To Err Is Human*. Washington, DC: National Academy Press.
- Institute of Medicine (ed.). 2001. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press.
- Mann, C. and F. Pervez. 2005. *Medicaid Cost Pressures for States: Looking at the Facts*. Washington, DC: Georgetown University Health Policy Institute.
- McGlynn, E., S. M. Asch, J. Adams, J. Keesey, J. Hicks, A. DeCristofaro, and E. A. Kerr. 2003. The quality of health care delivered to adults in the United States. *New England Journal of Medicine* 348 (26): 2635–2645.
- Newhouse, J. P. 1992. Medical care costs: How much welfare loss? *Journal of Economic Perspectives* 6 (3): 3–21.
- Newhouse, J. P. 2002. Why the quality chasm? *Health Affairs* 21 (4): 13–25.
- Newhouse, J. P. 2004. Financing Medicare in the next administration. *New England Journal of Medicine* 351 (17): 1707–1709.
- Organisation for Economic Co-operation and Development. 2004. *OECD Health Data, 2004*. Paris: OECD.
- Sommers, B. D. 2005. Who really pays for health insurance? The incidence of employer-provided health insurance with sticky nominal wages. *International Journal of Health Care Finance and Economics*, 5 (1): 89–118.