

Cost Control and Health Care Reform
The Case for All-Payer Regulation

Joseph White Ph.D.
Luxenberg Family Professor of Public Policy
Case Western Reserve University
May 12, 2009

Jxw87@case.edu

This draft is meant to encourage discussion of a policy option. It may be cited or circulated without restriction.

Executive Summary

Successful health care reform requires effective cost control. Yet the cost control discussion to date has been dominated by proposals involving system reorganization which, however attractive in principle, have already been analyzed by the Congressional Budget Office and judged unlikely to lead to significant savings within the next decade.

The system reorganization agenda may eventually yield savings, and could be justified on other grounds. But the need to make health care more affordable requires that more immediately effective cost controls be implemented. Fortunately, a wide range of experience and evidence shows that improved price regulation based on increasing payers' market power could yield significant savings.

President Obama's campaign proposal included one way of increasing market power: creation of a voluntary, publicly-sponsored insurance plan that, building on Medicare, could control costs more effectively than private insurers have managed to do so far. Its advocates argue that private insurers would be forced to compete by finding new efficiencies, so that the combination of public and private plans would greatly improve the health care system. Representatives of the insurance industry, however, along with other interests, have protested the public plan precisely because they fear it could do a better job of controlling costs and so "unfairly" win the competition.

If that concern is serious, rather than simply an effort by existing insurers to exclude any further competitors, it can be met by *sharing the ability of the public plan to achieve lower prices*. Private plans that did not create alternative delivery models such as closed-panel HMOs or effective capitated chronic care case management would be able to pay providers by the same rates as the public plan. This kind of system of coordinated payment is known as *all-payer cost control*, and varieties of this approach explain the far superior cost control experience of countries such as France, Germany, Japan, and the Netherlands.

This paper provides evidence that rate regulation is fundamental to cost control, and on why the system reorganization agenda is quite unlikely to provide comparable savings in the necessary time frame. A companion paper (available from the author) addresses issues about how the combination of public and private plans with all-payer regulation could be implemented.

Table of Contents

Introduction	4
I. All-Payer Rate-setting	6
II. Why Limits on Prices and Administrative Costs are Crucial	9
III. Other Methods Are Not Ready	15
Conclusion	19
Sources	20

Cost Control and Health Care Reform The Case for All-Payer Regulation ¹

Introduction

This paper argues for something that many health policy analysts already believe, but which has been strangely absent from the current health care reform agenda.

There are very good reasons to make *all-payer rate regulation* a centerpiece of health care reform. The current situation sees many medical care providers in many markets having the ability to demand payment rates from insurers which make cost control extremely difficult. While it is critical that providers be paid fair rates, we cannot afford to overpay them according to their ability to consolidate market power. Similarly, we can no longer afford the uncoordinated system that leaves some caregivers, such as primary care physicians, relatively underpaid. A reform that corrects payment rates in conjunction with covering the uninsured and better coverage for the underinsured should provide more secure incomes for medical care providers while reducing the trend of overall health care costs. Yet this goal cannot be achieved by the current competition among health insurers.

A system of all-payer regulation could achieve the largest part of the cost control advantages that advocates of a new publicly-sponsored plan correctly expect from that option. Yet it would help ensure that private insurers are not forced to pay excessive provider rates and can compete alongside the public plan, based on the value of the coverage they offer. A system of all-payer regulation would offer far-better cost control within the next decade than could be reasonably expected from the array of cost control methods that are currently being broadly promoted within the health policy community (Marmor, Oberlander and White 2009; also see below), while providing a better platform on which to construct such reforms.

President Obama sought some of the goals of an all-payer rate-setting system indirectly, in his campaign proposal for a publicly sponsored insurance plan, similar to Medicare, which would be offered as an alternative to private insurance, available to either employers or individuals. As John Holahan and Linda Blumberg (2008: 1) summarized:

“The intent of the competing public plan is to use the administrative efficiencies of government-run insurance plans, as well as the purchasing power of government to control costs. The underlying argument is that individual insurers

¹ The opinions and analysis expressed in this paper are the author’s alone. They in no way represent the views of anyone else associated with Case Western Reserve University, nor necessarily of anyone who passes this paper on to anyone else. Nevertheless, I should thank scholars who read drafts or sections and made suggestions. These include Diane Archer, John C Campbell, Mark Goldberg, Naoki Ikegami, Timothy S. Jost, Theodore R. Marmor, Jonathan Oberlander, and Tom Oliver. Again, they bear no responsibility for the content, save for the errors that they prevented.

do not have (or are unwilling to use) the market power to counter the pricing power of many hospital systems or physician specialties. This seems likely to remain true even if reforms lead to more aggressive competition in insurance/managed care markets. Thus the power of a larger purchaser motivated to contain costs is needed to control rising health care expenditures.”

The public plan adds an important dimension to cost control. But for this precise reason, it is anathema to insurers and conservatives who fear that the argument for the public plan is accurate, and that the public plan therefore would drive the private insurers out of the market (Abelson 2009a, Nichols and Bertko 2009, Sirota 2009).

In order to address that political objection, some advocates have argued that the bargaining power of the public plan should be reduced – for example, that it should not use Medicare’s market power (Nichols and Bertko 2009). But the last thing this country needs is least-common-denominator policies. **If the main problem, from the private insurers’ perspective, is the superior market power of the public plan, that should be addressed by *sharing the market power among all payers, through all-payer rate-setting.***

Believers in a public plan for its own sake could object to that compromise. But if our concern is how to control costs as quickly as possible, then it makes sense to help all payers control costs, rather than to have any extra time during which some plans would control costs much better than others. Moreover, as a matter of pure politics, the prospects of a single-payer reform appear close to nil. The goal, then, should be to get the best system possible, with the most equity and cost control. All-payer systems, which coordinate payment across payers (White 1999), are far superior to the kind of “competitive” chaos that has characterized the U.S. system to date.

Hence all-payer regulation may offer the best hope for effective reform that meets the key political constraints: the near-total disinterest of most legislators and the President in eliminating the private insurance industry; most voters’ preference for minimal disruption of their own coverage if it is in fact satisfactory; the fact that control of costs is for many citizens as urgent as expansion of coverage; and the extremely difficult budget situation that makes cost control a vital part of financing any coverage expansion and of protecting the nation’s economic health.

I am assuming for purposes of this analysis that the severity of the budget situation and the importance of cost control do not need to be argued. I will also assume that readers agree that the U.S. health care system is in severe need of reform. People who do not are not about to vote for any reform anyway. The goal of this analysis is to provide guidance about what kind of reforms can fix the system effectively.

I. All-Payer Rate-setting

All-payer rate-setting is the basic cost control method in many advanced industrial democracies. It saves money not only directly through the prices, but indirectly through limiting administrative costs (White 1995, 1999).

One of the standard attributes of health care systems, outside of the United States, is that care for the vast majority of citizens is paid for by the same rules to most if not all providers. Even if there are multiple insurers, as in France or Germany or the Netherlands or Japan, there are standard fee schedules by which hospitals, physicians, or pharmaceutical companies bill the insurers.

In Canada, the single payer, the provincial government, sets the rates in the context of political negotiations (frequently contentious) with the various classes of health care providers. How, then, does it happen in countries without a single payer? There are two main methods. In Japan or the Netherlands, a government body (the Ministry of Health and Welfare in Japan; the central tariff board in Holland) works out a set of fees (again, with some form of consultation with providers) that the various insurers then follow. In Germany, the government organizes the sickness funds into bargaining cartels that then negotiate with organizations of the providers. In either case, bargaining power on the payer side is concentrated in a way that simply is not seen in the United States.

One effect of this is that prices are systematically lower in all-payer systems than in the United States (Anderson et al. 2003). A second is that prices are much less varied, so that billing is much less complicated or expensive. Uwe Reinhardt provides a good example of the complexity in the U.S.:

“in New Jersey... I asked an insurer a very silly question – what do you pay for a colonoscopy. And he said what do you mean? You cannot answer that. It turns out the prices they pay to different hospitals vary by a factor of three. In California I asked the same thing. Give me some prices for an appendectomy. It ranged anywhere from \$800 to \$13,000. So I’m not sure what this market actually needs. There are no prices in this. It is whatever you can grab and negotiate” (Alliance for Health Reform 2008: 18).

This variation increases costs in the U.S. both for insurers (who must keep track of all the different prices from all the different plans they manage for all the different providers) and for caregivers (who have to maintain elaborate billing operations to deal with the insurers). The second part of this expense will not show up in some of the analyses of insurance overhead, but is clearly an important administrative cost load that is significantly higher in the U.S. than in other countries.

A further cost control advantage of all-payer regulation is its potential effect on the politics of cost control. One of the underappreciated problems with the current U.S. system is that cost control for one payer can be perceived as bad for other payers. The question is not so much whether cost-shifting exists. The scope for cost-shifting may be

(depending on the market) quite limited. But, in a situation in which lower incomes for providers from Medicare or Medicaid might lead them to be more likely to try to raise charges to private payers, the private payers have little reason to support public sector cost control. One does not hear of executives of General Electric or Dell, for example, calling for better control of Medicare expenses. One of the advantages of an all-payer system, then, is it would put all payers in the same boat, with the same concerns about leaks. It would thus increase not only market power for cost control but the political force for cost control.

An all-payer system would also greatly standardize billing (except for caregivers in nonstandard delivery arrangements, such as the Kaiser-Permanente model or a chronic care case management unit that offered capitated contracts to insurers). With more standard billing, it would be much easier to keep reliable records on practice patterns, and so both to identify providers with questionably high or low resource use, and perform research about the consequences of care patterns. One of the basic problems now is that all the different payers have only their own records about practice patterns, which means that any given payer's data may be misleading. Standard records should allow consolidated data – but standard records are extremely unlikely without standardized billing. In fact, standardization of billing is the logical driver for electronic medical records, providing an excellent reason for providers to both procure and adjust their software, and making it much easier for software companies to provide low-cost options (since standard is normally cheaper than customized).

Medical care providers naturally may worry that these advantages are at their expense: that prices will be driven down (or at least restrained), with negative effects on their income. Compared to any effort to control costs through “market forces,” however, all-payer regulation offers substantial benefits for providers: both significant administrative savings within the provider organizations, and fewer hassles because there will be fewer rules to understand. If it is accompanied by a good standard benefit package, with a public plan that offers free choice of providers, then that would also substantially reduce the current problems from figuring out to whom each patient can be referred and for what each patient is covered. So there can be major savings and reduction of hassles for providers, which means any effect on their net incomes will be much smaller than effects on their gross incomes.

All-payer regulation also could increase incentives for innovation that would increase efficiency. This may seem counterintuitive, since regulation is normally associated with paying fees per service, and the health policy community can seem obsessed with the purported inefficiencies of fee-for-service.² But, first, there are fees and there are fees: the Medicare hospital PPS system pays fees at a level of aggregation sufficient to provide incentives for efficiency. Second, if providers can increase or maintain incomes by

² “Purported” because, like everything else, it depends. If you pay physicians fees for operations, but budget a hospital, physicians become strong advocates for greater efficiency within the hospital! Conversely, capitation does not increase “efficiency,” in the sense of value for the money, if the system does not counter the incentive that it gives providers to shirk (do as little work as possible once they receive the capitation fee).

manipulating market power to charge high fees, they will do so. If that approach is foreclosed, then they will have stronger incentives to look for reorganizations (such as chronic care case management) that would improve value for purchasers and *net* income for providers.

A final important aspect of all-payer systems is how standard rates can increase transparency and protect consumers. In our current system, the public cannot know the prices paid by insurers for services, because that is proprietary information. Such obscurity is an invitation to either fraud or confusion. Fraud in a sense occurs if cost-sharing is required for in-network coverage, and insurers base the cost-sharing on the provider's posted price rather than on what the insurer actually pays (as has happened in some Medicare Part D plans; see Precht 2008). Confusion (though Senator Rockefeller, D-WV, has called it fraud) occurs if a patient goes "out of network" and then the insurer has to determine what to pay the patient based on the supposed "usual and customary" fee of the out-of-network provider. The fact is that nobody knows what such fees are,³ and insurers are widely accused of understating the amounts so as to cheat consumers on their reimbursements (Abelson 2009b). In an all-payer system both problems – misreporting of in-network rates and of out-of-network rates -- should be greatly reduced.⁴

All-payer systems can have some variation. The Japanese system has a standard fee schedule, but cost-sharing is lower for the elderly.⁵ In Germany, ten percent of the population is covered by private insurers (as opposed to nonprofit sickness funds) that pay by somewhat higher rates. In France, which unlike Germany has significant cost-sharing, there have been situations in which some physicians could "extra bill" larger amounts above the reimbursement schedule than other physicians could. But any all-payer system dramatically increases payer power compared to the U.S., must substantially reduce billing expenses compared to in the U.S., and has to be more transparent than the current U.S. system.

³ How could any fee be "usual and customary" if most of each provider's business is charged as "discounted" prices to different insurers, and normally different prices to different insurers? Nevertheless, insurers in the state of New York were accused of using inaccurately low prices generated by a database managed by UnitedHealth Group, and in a settlement they agreed to change their practices (Abelson 2009b).

⁴ If all payers actually pay by exactly the same rate, the problems go away. If some payer somehow negotiates lower rates, then the out-of-network problem goes away (because anyone who goes out of network pays the standard, known, rates).

⁵ See the descriptions in Campbell and Ikegami 2008; for many years the cost-sharing also varied among the company funds, the municipality funds, and the fund for other employees, but that was recently changed.

II. Why Limits on Prices and Administrative Costs are Crucial

Without good control of payment rates cost control is impossible. International experience shows that other countries control costs better mainly by better control of payment rates. Experience within the United States, both between public and private insurance and over time in private insurance, shows the same pattern. Payment rates are also a major factor in other sources of cost, such as excessive dissemination of equipment that can then lead to excessive volume.

All comparative studies show that the major reason costs are higher in the United States than in other countries is that payers pay higher prices, for a given service, in the United States. Other reasons include excess administrative costs in the U.S., and excessive capacity for some services. (Ginsburg 2008; Anderson et al. 2003; Angrisano et al. 2007). But administrative costs are higher in part because of the failure to lower and standardize prices, as is capacity. In the most extensive analysis to date, the McKinsey Global Institute concluded that competing explanations – such as that the U.S. population is particularly unhealthy, or Americans use many more medical services – just aren't true (Angrisano et al. 2007).

The McKinsey study is just one of many that challenge the idea that costs are higher in the United States because the U.S. population is particularly unhealthy, or Americans use many more medical services (Angrisano et al. 2007). These studies also create great doubt about any notion that care in the U.S. costs more because it provides higher quality. A good summary of data (some more convincing than others) is Shea et al 2007. Part of the overall poor performance of the United States (such as more life-years being lost to medically treatable conditions than in many other countries) is due to our inferior access – all the uninsured and underinsured. So studies of the success of treatment for people who actually get it tend to rank the U.S. fairly highly – but not, overall, at the top (for examples see OECD 2003).

In some cases there is excess capacity and so production is less efficient in the U.S. because excessive payment rates allow excessive purchase of equipment. As Paul Ginsburg puts it, “U.S. costs in outpatient settings are higher because of subscale operation of facilities. With prices very high, outpatient facilities in the United States can earn a profit despite underutilizing capacity.” (Ginsburg 2008, 10; see also Redelmeier and Fuchs 1993).

The evidence about prices and administrative costs, however, is not limited to comparisons between the United States and other countries.

Within the United States, Medicare spending per enrollee has risen, on average, by about one percentage point less per year than has private insurance spending over the period from 1970 to 2006 (MedPAC 2008a, 9). Medicare certainly has not achieved this by reducing volume or managing care; it has relied mainly on paying lower prices per service, which is possible because few providers can afford to opt out of such a large

plan, and by some bundling of payments, as in PPS systems (Hurley, Strunk and White, 2004).⁶

Perhaps the most interesting evidence about the importance of prices, however, comes from the rise and fall of “managed care” within U.S. private insurance. Contrary to conventional wisdom, the extensive reports from the Health System Change studies show that both the period of good private sector cost control in the mid-1990s and then the collapse of cost control around 1998 was due to dynamics of price-setting rather than care management. My analysis of the evidence from the Health System Change and other studies (White 2007) supports the following points:

* The rise of “managed care” in the 1990s was mostly a shift from traditional insurance to PPOs, which barely manage treatment at all; and the shift to HMOs that did occur was largely to forms that did not manage treatment much (Claxton et al. 2006; Gray 2006).

* The cost control was too sudden and widespread to be explained by “management.” Insurance premium increases suddenly shrank in all of the markets studied by the Center for Studying Health System Change, with little relation to the level of HMO enrollment in the market. Premium trends for all kinds of plans declined, while the prices paid for services by all types of insurers also declined (CSHSC 1997a; ProPAC 1997).

* Accounts even at the peak of success emphasized that plans had “used fairly crude measures, including leveraging aggregated purchasing power to negotiate price discounts with providers,” and only one simple form of management, “shifting delivery from inpatient to outpatient settings” (CSHSC 1997b).

* Even reductions in inpatient days only matter if prices are controlled. As Uwe Reinhardt warned, hospitals could raise prices for inpatient care if volume declined (Reinhardt 1996). In 1993 Peter Kongstvedt, warned that, “as care has shifted, so have charges. It is not uncommon to see outpatient charges exceeding the cost of an inpatient day unless steps are taken to address that imbalance” (Kongstvedt 1993, 86).

* Reports both at the time and in retrospect emphasized what Jeff Goldsmith called “panic-driven discounts” on the part of providers (CSHSC 1997b: 4), caused in part by publicity for the Clinton proposals (Ginsburg 1996), which, as Joy Grossman and colleagues summarized, caused providers to believe they had to make concessions to get contracts “to ensure they did not lose patients or revenue as beneficiaries moved into managed care” (Grossman et al.2002: 3).

⁶ Another factor is that traditional Medicare is not subject to competition from other plans that could come in and offer providers higher fees in order to get them not to sign up with Medicare, and then use a more attractive network to attract Medicare patients. In the private insurance market, even a plan with large market share, like the Blues in many states, is restrained from jawboning down fees by the prospect that providers would simply refuse to contract with them and would sign up with other payers such as Aetna or United. Thus competition through selective contracting, as opposed to cooperation among payers, can drive up costs in the private group market.

* Reports on the subsequent cost spiral upward also emphasized market power and prices. A good example is James C. Robinson's account of Aetna's strategy to win discounts by accumulating market share failing when providers revolted, "consolidating their local markets and demanding rate increases, litigating over delays in payment and denials in authorization, and, in some instances, simply walking away from HMO networks" (Robinson 2004:45; see also White, Hurley and Strunk 2004).

* PPOs triumphed over more extensively "managed" systems not merely because management was unpopular, but because insurers concluded that the financial cost of management did not necessarily exceed the savings from reduced care (Schoenbaum 2004; Hurley, Strunk and White 2004).

* The common rhetoric that the managed care backlash generated legislation that forced plans to back off from management is simply not supported by the evidence. There was very little substantive, as opposed to symbolic, regulation (Sloan, Ratliff and Hall 2005; Hall 2005; Jacobson 2003). Nor was legislation reported to have significant effects within the Community Tracking Study markets (note the absence of references to such effects in Lesser, Ginsburg and Devers 2003, or Mays, Hurley and Grossman 2003).

In short, both the successes and failures of "managed care" were actually about price-setting, not care management.

Some analysts may believe that price restraint is not effective because of behavioral response by physicians, namely that they increase the volume and intensity of services when prices are restrained. In fact, there is reason to doubt there is any "behavioral response" for many services. CBO reports that, "a decline in the amount that a provider is paid would generally be expected to result in *fewer* (my emphasis) services being delivered. That type of response has been observed in skilled nursing facilities and home health agencies, and there is some evidence that it occurs in hospitals" (CBO 2008: 109). (CBO 2008: 109). Physicians are different, and there is good evidence that in some cases they induce further demand. Nonetheless, studies of the behavioral response estimate the offset only at between 20 and 40 percent of a rate cut's impact on payments. CBO's own research estimates a 25% response (CBO 2008). The Medicare actuaries have estimated an average response of 30 percent, and that figure was endorsed by the 2000 Technical Review Panel on Medicare cost estimates (Medicare Actuaries 1998; Technical Review Panel 2000). In the case of other costs, such as pharmaceuticals, it is easy to see that the drug companies try to induce demand, but hard to see how they would induce demand in response to fee restrictions in particular.

Hence the vast majority of savings from price restraint are not offset. Moreover, theorists who emphasize "behavioral response" by raising volume also should realize that if only volume were controlled, not prices, the incentive to raise prices would be at least as great as any incentive to raise volume in the face of price restraint. But it is much, much easier to raise prices on insured patients than to get them to have extra procedures!

Any regulatory or cost control system requires that payers work to make it effective. No cost control will work automatically. Payers have to be able to use the tool when it is available, and they have to intend to use it for cost control. These conditions are by no means always met. One objection to an all-payer proposal would be that we already tried all-payer regulation in particular states, such as New Jersey, and it didn't work. A wave of state all-payer regulations did crest in the 1980s and then recede (McDonough 1997).

This record is deceptive in a few ways. First, the performance of the state regulations was pretty good for many years (McDonough 1997; Ginsburg and Thorpe 1992). Second, the systems were flawed by the fact that they applied only to hospitals. This had a series of perverse consequences, especially because of the interaction between hospital costs and uninsurance. Hospital rate-setting became a mechanism to subsidize hospitals that had higher costs per paying patient because of their large numbers of non-paying patients. For example, New Jersey created a surcharge on all hospital bills, which was then put into an Uncompensated Care Trust Fund (UCTF) that was used to subsidize hospitals with large numbers of uninsured patients. The attempt to subsidize the uninsured through the rate-setting then had further perverse consequences. First, the low-cost hospitals wanted out of the system, and became advocates against it. Further, the fact that the costs of the uninsured were built into the charges meant that the New Jersey rates were higher than the Medicare PPS rates, which did not look like good cost control. Perhaps worse, the unofficial hospital insurance built into the rates meant that the uninsured in New Jersey could get hospital care much more easily than care outside the hospital, with the remarkable result that in 1990, in New Jersey, the uninsured used 30 percent more hospital care than the insured! (Volpp and Siegel 1993).

Burdening the rate regulation system with the insurance function is a very bad idea. The stability of rate regulation in the 1990s was further threatened by the rise of "managed care." The issue was whether "managed care" plans (particularly HMOs) could get discounts below the standard fees.⁷ In a situation where the standard fees were based on previously uncontrolled costs; where the standard fees included subsidies to the urban hospitals in the name of covering the uninsured or the costs of teaching functions; where major rate-setting states also had extensive hospital capacity, leaving room for some bargaining by HMOs; and where policy-makers did want to encourage growth of HMOs so did not force them to pay the standard prices; HMOs were able to negotiate discounts below the rates. As the political winds also shifted in many states (Maryland being an exception), more conservative governments both abandoned the unsustainable subsidy function of rate-setting, and hoped that "managed care" would control costs.

Unfortunately for payers, as described above, the period during which insurers could extract lower fees from providers, especially hospitals, proved short-lived. Hospitals increased their market power and came to dominate the negotiations. That has now been true for a decade, and there appears to be little prospect that uncoordinated payers will be able to change the bargaining dynamic. Therefore one of the major reasons that

⁷ The literature on the demise of all-payer regulation is another piece of evidence about the primacy of price "discounting" in the rise of "managed care"; see McDonough 1997 and Ginsburg and Thorpe 1992.

politicians abandoned regulation – that, for a short period, insurers seemed to be able to negotiate lower prices without the all-payer backup – does not appear relevant.

But the state experience is a cautionary tale, a tale of how to do it right (and wrong). Any rate regulation should not be used to provide care to the uninsured – because it screws up the rate regulation and because the idea of reform is not to have people uninsured anyway. Nor should it be used to finance other non-clinical functions. Medicare shouldn't be paying for medical education, and a new all-payer system shouldn't be burdened with medical education costs. If some activity gives a hospital extra costs beyond clinical care, that gives two possibilities: the activity is socially valuable, so should be identified and subsidized separately, or it isn't society's concern, in which case it shouldn't be subsidized in the rates.

The major goal of rate regulation should be to control costs, so the idea is not to set rates high enough that private plans can easily undercut the rates! And, regulating hospital costs but not other costs could cause all sorts of distortions in either patient or payer behavior. It makes a lot more sense to regulate payments for all covered services.

Some analysts may argue that prices do not explain increases in health care costs, on the grounds that prices for services tend not to rise much, once established.. So how could prices be responsible for rising costs? A couple of points are missing from such analyses.

First, the system tends to set initial prices for new services that are too high. The argument that rising costs are due to new services coming on line assumes that those services have some natural price. They don't; the price of new services has to be set, and it tends to be much higher in the U.S. than in other countries. Hence the promotion of new services increases costs more here than in other countries, because of weak countervailing power over prices. The extreme case of this dynamic is pharmaceuticals.

The second point is even more fundamental. The problem is not so much that prices rise, as that they don't fall. Computers have not become more expensive over time. They've become less expensive as the market has grown and so volume has reduced the costs per unit. But this does not happen, to the same extent, for medical services that become more common, such as laser surgery for eyes, statins used to reduce cholesterol, and various scanning procedures. Analysts who argue that "primary care" is underpaid and procedurally-oriented specialists overpaid are making precisely this point, from a different perspective. The argument is that specialists have benefited from the fact that there are increasing efficiencies of production for their services, but that they generally have captured the benefits rather than giving the efficiencies back to their customers/patients/insurers in the form of lower prices.

In short, increasing volume is not an indication that prices don't matter; it in many cases is an indication that the price should be lowered. This is especially true when the volume of some specific service, such as imaging services or an elective surgery, rises quickly.⁸

⁸ This necessity is well understood in the international health policy community. In his comments on a draft of this paper, Naoki Ikegami noted that, "the term 'mole-bashing' was coined by George Schieber

I am not claiming that better control of prices will solve all health care cost problems. Nevertheless, the evidence is overwhelming that payment rates are primary. They are the most important factor in cost; the factor that is most easily manipulated by both providers and payers; and if they are not properly controlled, all other measures will be insufficient. Therefore a cost control approach that gains better control of prices paid by all payers is fundamental.

when we had a group discussion 20 years ago. Procedures that have sharp volume increases (the mole), have their heads bashed (by cutting their fees). This crucial point has been missed by people who insist that price control does not work. They think that prices, once set, are set in stone. On the contrary, prices must be proactively regulated (and the mole must be bashed).” Dr. Ikegami speaks from experience; the Japanese are particularly good at this (Campbell and Ikegami 2008).

III. Other Methods Are Not Ready

It would be nice if substantial savings could be realized, within the time frame required by both public and private budget concerns, from initiatives such as paying for performance rather than just for services (“P4P”), greater reliance on evidence-based medicine, health information technology that could warn providers about potential errors and improve sharing of information about patients, improved primary care that, in theory, could lead to better coordination of care, and encouragement of patients to manage their own chronic conditions better and citizens to stay healthy. Yet careful analyses, such as those done by the Congressional Budget Office (CBO), suggest that the technical, institutional, and political difficulties of such initiatives are so severe that it is unlikely that any of them individually, or all in combination, will yield meaningful savings over the next decade.

These approaches were endorsed by both major party nominees in the recent presidential election, and are heavily publicized in the health policy literature. Nevertheless, when asked to analyze the candidates’ proposals, senior health policy experts have expressed great doubt. As Paul Ginsburg responded at a forum sponsored by the Alliance for Health Reform and Robert Wood Johnson Foundation, “there are a number of things that... all the candidates agree on. And we have to be suspicious of how significant they are.” In reference to HIT in particular, he asked and answered: “will it contain costs? Very uncertain. A number of the other things they are talking about, will they contain costs? Very uncertain” (Alliance for Health Reform 2008: 11, 16) “If you gave us a truth serum,” Uwe Reinhardt responded, “a couple glasses of wine, say, we would probably all come out saying whether it saves dollars per year is not so clear. But it will give us more value for the dollar. That would pretty assure us I think. So these are not to be laughed off, but I do not think that will get us out of the box” (Alliance for Health Reform 2008: 16).

Anyone who expects substantial and timely savings from any of these measures should be discouraged by reading the assessments in the Congressional Budget Office’s report on *Key Issues in Analyzing Major Health Insurance Proposals* (CBO 2008: 131-54). CBO is skeptical across the board, and that is important not only because it reflects the judgment of a credible group of neutral analysts, but because CBO’s judgment is what will matter if congressional scorekeeping rules become part of a reform debate – which is usually the case.

P4P initiatives have generally been designed to improve the quality of medical care, not to save money. Even on the quality goal, they have had “lackluster early results” (Rosenthal 2008). The heavily publicized British P4P initiatives have dramatically increased costs – somewhat intentionally, but somewhat by surprise (Galvin 2006). Even if it were possible for P4P measures to reduce costs – such as by reducing errors that lead to higher costs – those approaches have neither been found nor demonstrated, and they would take years to implement once (if) found.

Better evidence for the effectiveness of interventions would, ideally, raise quality. Whether it would save money is much less clear. The many distinguished advocates of EBM as a route to cost control emphasize the fact that counties with less extensive utilization of services tend to have the same quality of outcomes as counties with more extensive utilization. In theory, therefore, if the high-cost counties only followed the same evidence as the low-cost counties, costs would be much lower (Miller 2008).

In practice, there are many problems with such hopes. The first is just a caution: a substantial portion of variation in costs among geographic areas is not due to utilization (MedPAC 2003a: 3-16). Second, there is little if any reason to believe that practices in the low-utilization areas are based on “evidence” any more than the practices in the high-utilization areas. The usual argument is that if practice in the high-cost areas were constrained to match practice in low-cost areas, overall costs would be much lower. In order to attain that goal, one would have to define the rules and rationale for practice in the lower cost areas. But that would require the missing evidence to provide rationales. Third, there is substantial reason to believe that guidelines in many cases would call for more extensive use of healthcare resources (McGlynn et al. 2003).

In short, the existence of variations does not mean either that evidence or institutions exist that can be used to identify and then reduce inappropriate volume. The Obama administration and many academics have emphasized comparative effectiveness research. But this research has substantial weaknesses even as described by its advocates (Neumann 2005). It takes years to develop useful evidence, often is not possible, and will only have significant impact if it is tied to reformed financial incentives. These are among the reasons why CBO has estimated that, in itself, investment in cost-effectiveness research is unlikely to “offset the costs of the research within a 10-year budgetary time frame” (CBO 2008: 146).

Instead of trying to address variations by regulating individual medical treatments, unjustified variations might be reduced in other ways. The variations literature generally concludes that variations are “supply-sensitive” – in other words, that the capacity of the local system for some services shapes their supply, and that, in particular, certain specialist services are provided based more on the ability to do so than according to medical need (for just one example, see Fisher et al. 2009). Any efforts to address supply effects, however, would work much better in a system of coordinated payment than without that coordination. Such efforts could take a variety of forms, such as reducing fees from all payers for services that were being provided in excess, or all payers agreeing that some sort of capacity regulation (such as not purchasing from new entrants into the MRI supply) were necessary in the local market. Any such measures would be far more effective if they combined efforts of all payers. So that theme in the variations literature is an argument for all-payer regulation, not against it.

HIT might reduce costs in three ways. First, better records could generate information needed for cost-effectiveness research. But that could only occur after many years – first to implement the HIT, then to do the studies, and then to find ways to implement findings. Second, records could be used to transfer information across medical settings,

improving coordination of care (which in theory could reduce costs) and preventing duplication of work. This, however, requires not only dissemination of equipment but standardization of records across providers. That requires either that government impose a set of rules or that some miracle create voluntary agreement. Any new rules would create losers (whoever had invested in other record formats) and be extremely controversial. Even once created, it would take years to implement that standard record-keeping.

The third source of savings could be routines that limited medical errors by giving warnings, e.g. of drug interactions. As Jerome Groopman and Pamela Hartzband report, however, a series of major studies published over the past two years suggest that electronic health records are not associated with better quality care. Electronic records in some cases may even increase the risk of errors – because, “once a misdiagnosis enters into the electronic record, it is rapidly and virally propagated” (Groopman and Hartzband 2009). Even if there are savings from fewer errors – which is unfortunately doubtful – whether those savings would exceed the costs of the systems is not clear. The CBO concluded that, overall, the prospects for savings from HIT are extremely modest (CBO 2008: 147-50).

There is evidence that other countries organize and emphasize primary care in ways that could lower costs (Starfield, Shi and Macinko 2005). A higher proportion of primary care providers relative to specialists appears to be associated with lower costs in the United States, but not lower quality, and there are varied reasons to promote primary care in the U.S. (MedPAC 2008b: 23). The most direct way to do so, however, is to adjust the prices paid for services, which currently tend to encourage specialty training (MedPAC 2008b). That, however, is an argument for all-payer rate structures, as relative prices that apply to all or almost all fees send the clearest and strongest signal. Further system reorganization to favor primary care is exceedingly difficult; and any measures could only yield noticeable results over many years, because of the lag in converting incentives for medical students into a different supply of physicians.

Potentially related goals to improve chronic care by creating institutions that provide continual counseling and monitoring, perhaps by non-physician professionals (e.g. the “Medical Home” or chronic care case management) also are unproven. CBO finds little evidence of savings from either approach (CBO 2008: 139-144). These reforms tend to involve new services that will require new compensation, so could even increase costs. Even MedPAC, which has been promoting care coordination services and the “medical home,” acknowledges that data to date does not show savings, in part because of the extra costs (MedPAC 2008b, 39-40).

Proposals to improve health and therefore reduce the costs of treating disease have two forms. One involves “expanding the use of clinical preventive services” (CBO 2008: 136). Some, such as immunizations, surely save money. But much of the cost-effective prevention is already provided. As Louise Russell’s work has shown, “hundreds of studies have shown that [clinical] prevention usually adds to medical spending” (Russell 2009; see also Cohen 2008, Russell 2007). In some cases “preventive” care, such as tests

for prostate cancer, leads to overtreatment (CBO 2008:: 139). Measures need to be considered individually, but the evidence for savings from clinical prevention in general is discouraging.

A more fundamental form of prevention would involve changing either individual behavior or society in ways that improve health status. Extensive literatures argue that, respectively, reducing either obesity or inequality would improve health. This is not the place for a discussion of those studies. It should be obvious, however, that policies to address either condition would be extremely controversial, likely very difficult to implement, and so neither is going to be reduced anytime soon. CBO does not even consider social reform such as inequality reduction in its analysis, and its discussion of policies to change health habits shows distinct (and justified) skepticism (CBO 2008: 134-36).

This review is not meant to say that reforms along the lines above could not improve the U.S. health care system, eventually. It takes a great deal of optimism and faith, however, to believe that they would be sufficient to reduce health care cost trends in a way that would either stabilize the current private insurance system or make it easier to finance public coverage. All such methods would need to be supplemented by strong price regulation even if they worked. Because the price regulation can take effect more quickly, and with more certain results, it even can provide the breathing space necessary to develop the alternatives – if they can in fact be made to work.

To summarize, there is virtually no evidence that P4P initiatives will control costs; in the most heavily promoted and analyzed implementation, in the United Kingdom, P4P greatly increased costs. Comparative effectiveness research is widely promoted, but the evidence base for measuring effectiveness is narrow and shallow, and the question of how to turn research into practice has not been answered. The highly influential literature that discusses variations across areas in their costs and in utilization (the variation in utilization being substantially less than the cost variation however) assumes that, if the high-utilization areas practiced in the same way as the low utilization areas, costs would be much lower. It does not, however, show that variations are due to better use of evidence in some areas than others. Instead, the apparent driver of most variations in utilization is the capacity to supply services, and supply can be better addressed on an area-wide, all-payer basis.

Conclusion

An all-payer approach to cost control is likely to face three types of skepticism.

The first will come from advocates of a single-payer approach, for whom the key question is whether all-payer regulation with both a voluntary public plan and private insurers would approach the performance that they expect from their preferred reform. I have shown how all-payer reform can create both the concentrated payer power and much of the administrative savings that having a single payer would achieve.

A second group, particularly prominent in the health policy community at present, may prefer alternative methods of cost control that promise to increase quality and control costs simultaneously. These include attempts to have more evidence-based medicine, cost-effectiveness research, health information technology, and ways to “pay for performance.” All would be nice ideas if they could be made to work; as I have reviewed above, however, effective methods have not been found. All these approaches at best require much more development. All-payer regulation offers much better cost control than the status quo while other measures are being developed.

A third set of possible objections could come from supporters of the private insurance industry, out of either economic connection, ideology, or just a general fear of large changes. For them, the question should be (assuming they can accept there are severe problems) whether such a reform can give the industry a chance to make a constructive contribution to U.S. health care finance. I believe it can, though I’m not so naïve as to assume all insurers would behave constructively. I address that issue at more length in a companion paper, “Implementing Health Care Reform with All-Payer Regulation, Private Insurers, and a Voluntary Public Insurance Plan” (available from the author). I apologize for the clunky title.

If it were easy to improve the U.S. health care system it would already have been done. Because it is so politically difficult, many politicians and analysts may believe that it would be better not to frankly address the regulation that is needed to control costs.

I do not see how that will work substantively or politically. Substantively, reform that postpones any effective cost control will not solve the problems of cost and access, except at unacceptable costs to the federal budget. Politically, without credible cost control there is little reason for business interests to back reform, and reform is highly unlikely to pass without some business support. Nor does it seem likely that legislators who care especially about the federal budget will support reform that CBO does not say includes effective cost controls. Yet those legislators hold the balance of power in Congress.

Nobody should imagine that meaningful reform will be easy to enact now. Yet, if there is a better chance to enact legislation that would control costs than legislation that would not, doing the job right should be on Congress’ agenda.

Sources

Abelson, R. 2009a. Health Insurers, Poised for Round 2. *New York Times*, March 1, pp. BU1, BU6.

----- . 2009b. Senator Investigates Health Insurers' Out-of-Network Rate Practices. *New York Times*, March 31,

Alliance for Health Reform. 2008. Putting the Brakes on Health Care Costs: Would the Candidates' Plans Work? Are There Better Solutions? Transcript, June 3. Downloaded 2/28/2009 from <http://www.allhealth.org/briefingmaterials/Transcript-June3,2008-1240.pdf>.

Anderson, G.F., U.E. Reinhardt, P.S. Hussey, and V. Petrosyan. 2003. It's the prices, stupid: why the United States is so different from other countries. *Health Affairs* 22, no. 3, 89-105.

Angrisano, C., D. Farrell, B. Kocher, M. Laboiesiere, and S. Parker. 2007. Accounting for the Cost of Health Care in the United States. San Francisco: McKinsey Global Institute.

Campbell, J.C. and N. Ikegami. 2008. *The Art of Balance in Health Policy: Maintaining Japan's Low-Cost, Egalitarian System* (paperback). Cambridge University Press.

CBO (U.S. Congressional Budget Office). 2008. *Key Issues in Analyzing Major Health Insurance Proposals*. Washington, DC: Congressional Budget Office.

Center for Studying Health System Change (CSHSC). 1997a. Health Care Costs: Will They Start Rising Rapidly Again? Issue Brief 10.

----- . 1997b. Patients, Profits, and Health System Change. Issue Brief 9.

Cheng, T-M, and U.E. Reinhardt. 2008. Shepherding Major Health System Reforms: A Conversation With German Health Minister Ulla Schmidt. *Health Affairs* 27, no. 3, w204-w213.

Claxton, G., J. Gabel, I. Gil, J. Pickreign, H. Whitmore, B. Finder, B. DiJulio, and S. Hawkins. 2006. Health Benefits in 2006: Premium Increases Moderate, Enrollment In Consumer-Directed Health Plans Remains Modest. *Health Affairs Web Supplement*, w476-w485.

CMS (Centers for Medicare and Medicaid Services). 2009. Notice of Immediate Imposition of Intermediate Sanctions (Suspension of Enrollment and Marketing)... (for various WellPoint plans). January 12. Downloaded 4/2/2009 from http://www.healthlawyers.org/Members/PracticeGroups/PPMC/emailalerts/Documents/wellpoint_sanction_letter_final.pdf

Cohen, J.T., P.J. Neumann and M.C. Weinstein. 2008. Does Preventive Care Save Money? Health Economics and the Presidential Candidates. *New England Journal of Medicine* 358: 661-63.

Dyckman & Associates. 2003. Survey of Health Plans Concerning Physician Fees and Payment Methodology. Performed for Medicare Payment Advisory Commission (August).
[http://www.medpac.gov/publications/contractor_reports/Aug03_PhysPaySurvey\(cont\)Rpt.pdf](http://www.medpac.gov/publications/contractor_reports/Aug03_PhysPaySurvey(cont)Rpt.pdf)

Fisher, E.S., M.B. McClellan, J. Bertko, S.M. Lieberman, J.J. Lee, J.L. Lewis, and J.S. Skinner. 2009. Fostering Accountable Health Care: Moving Forward in Medicare. *Health Affairs* web supplement, January 27, w219-w231

Galvin, R. 2006. Pay-for-performance: too much of a good thing? A conversation with Martin Roland. *Health Affairs Web Supplement* 25, w412-w419

Ginsburg, P.B. 1996. The RWJF Community Snapshots Study: Introduction and Overview. *Health Affairs* 15, no. 2, 7-20.

-----2008. High and rising health care costs: Demystifying U.S. health care spending. The Robert Wood Johnson Foundation Research Synthesis Report No. 16 (October).

Ginsburg, P.B. and J.M. Grossman. 2005. When the Price Isn't Right: How Inadvertent Payment Incentives Drive Medical Care. *Health Affairs* 24 Web Supplement, W5-376 – W5-384, 9 August.

Ginsburg, P.B. and K. Thorpe. 1992. Can All-Payer Rate-Setting and the Competitive Strategy Coexist? *Health Affairs* (Summer), 73-86.

Gray, B. 2006. The Rise and Decline of the HMO: A Chapter in U.S. Health Policy History. In *History and Health Policy in the United States: Putting the Past Back In*, edited by R. Stevens, C.E. Rosenberg and L.E. Burns. New Brunswick, NJ: Rutgers University Press., 309-40.

Groopman, J. and P. Hartzband. 2009. Obama's \$80 Billion Exaggeration. *The Wall Street Journal* online (March 11), downloaded 3/23/2009 from
<http://online.wsj.com/article/SB123681586452302125.html>

Grossman, J., F.C.Strunk, and R.E. Hurley. 2002. Reversal of Fortune: Medicare + Choice Collides With Market Forces. Center for Studying Health System Change Issue Brief 52.

Hall, M.A. 2005. The Death of Managed Care: A Regulatory Autopsy. *Journal of Health Politics, Policy and Law* 30, no. 3, 427-452.

Holahan, J. and Blumberg, L. 2008. Can a Public Insurance Plan Increase Competition and Lower the Costs of Health Reform? Urban Institute Health Policy Center (October 3), at <http://www.urban.org/publications/411762.html>

Hurley, R.C., B.C. Strunk and J.S. White. 2004. The Puzzling Popularity of the PPO. *Health Affairs* 23, no. 2, 56-68.

Jacobson, P. 2003. Who Killed Managed Care? A Policy Whodunit. *Saint Louis University Law Journal* 47, 365-396.

Kongstvedt, P.R. 1993. *The Managed Care Handbook 2nd ed.* Gaithersburg MD: Aspen.

Lesser, C.S., P.B. Ginsburg and K.J. Devers. 2003. The End of an Era: What Became of the Managed Care Revolution in 2001? *Health Services Research* 38, no. 1, part 2, 337-355.

Marmor, T.R., J. Oberlander and J. White. 2009. The Obama Administration's Options for Health Care Cost Control: Hope vs. Reality. *Annals of Internal Medicine* 150, No. 7 (7 April) downloadable from <http://www.annals.org/cgi/content/full/0000605-200904070-00114v1>

Mays, G.P., R.E. Hurley, and J.M. Grossman. 2003. An Empty Toolbox? Changes in Health Plans' Approaches for Managing Costs and Care. *Health Services Research* 38, no. 1, part 2, 375-393.

McDonough, J.E. 1997. Tracking the Demise Of State Hospital Rate-Setting. *Health Affairs* 16, no. 1, 142-49.

McGlynn, E.A., S. M. Asch, J. Adams, J. Keeseey, 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* 368, no. 26, 2635-2645 (June 26).

Medicare Actuaries. 1998. Memorandum: Physician Volume & Intensity Response. (August 13). Downloaded 2/28/2009 from <http://www.cms.hhs.gov/ActuarialStudies/downloads/PhysicianResponse.pdf>

MedPAC (Medicare Payment Advisory Commission). 2003a. *Report to the Congress: Variation and Innovation in Medicare.* Washington, DC: MedPAC.

-----, 2003b. Transcript of public meeting of December 4, downloaded 3/7/2009 from http://medpac.gov/transcripts/1203_meeting_alltranscripts.pdf

-----, 2008a. *Healthcare Spending and the Medicare Program.* Washington DC: MedPAC.

-----, 2008b. *Report to Congress: Reforming the Delivery System*. Washington, DC: MedPAC.

Miller, Mark. 2008. Report to the Congress: Reforming the Delivery System. Statement of Mark E. Miller Ph.D., Executive Director, Medicare Payment Advisory Commission, Before the Committee on Finance, U.S. Senate. (September 16). MedPAC.

Neumann, P.J. 2005. *Using Cost-Effectiveness Analysis to Improve Health Care: Opportunities and Barriers*. New York: Oxford University Press
New York Times. 2007. World's Best Medical Care? Editorial (August 12), downloaded 3/22/09 from <http://www.nytimes.com/2007/08/12/opinion/12sun1.html>

Nichols, Len M. and John M. Bertko. 2009. A Modest Proposal for A Competing Public Health Plan. March, New American Foundation.
<http://www.newamerica.net/files/CompetingPublicHealthPlan.pdf>

OECD (Organisation for Economic Co-operation and Development). 2003. *A Disease-Based Comparison of Health Systems: What is Best and at What Cost?* Paris: OECD.

Precht, Paul. 2008. Medicare Part D Drug Benefit. Testimony before the U.S. House of Representatives Committee on Oversight and Government Reform. July 24.
http://www.medicarerights.org/pdf/072408_PrechtTestimonyonPartD.pdf

ProPAC (Prospective Payment Assessment Commission). 1997. *Medicare and the American Health Care System: Report to Congress*. Washington, DC: ProPAC.

Redelmeier, D.A. and Fuchs, V.R. 1993. Hospital expenditures in the United States and Canada. *New England Journal of Medicine* 328, no. 11, 772-78.

Reinhardt, U.E. 1996. Perspective: Our Obsessive Quest to Gut the Hospital. *Health Affairs* 15, no. 2, 145-154.

Robinson, J.C. 2004. From Managed Care to Consumer Health Insurance: The Fall and Rise of Aetna. *Health Affairs* 23, no. 2.

Rosenthal, M.B. 2008. Beyond pay-for performance – emerging models of provider-payment reform. *New England Journal of Medicine* 359, 1197-1200.

Russell, L.B. 2007. Prevention's Potential for Slowing the Growth of Health Care Spending. Washington, DC: National Coalition on Health Care.

-----, 2009. Preventing Chronic Disease: An Important Investment, But Don't Count on Cost Savings. *Health Affairs* 28: 42-5.

Schoenbaum, S.C. 2004. Physicians and Pre-paid Group Practices. *Health Affairs Web Supplement*, W4-76 – W4-78.

- Shea, K.K., A.L. Holmgren, R. Osborn and C. Schoen. 2007. Health System Performance in Selected Nations: A Chartpack. The Commonwealth Fund, May.
- Sirota, David. 2009. For Competition Before They Were Against It. San Francisco Chronicle (March 13), downloaded from <http://www.sfgate.com/cgi-bin/article.cgi?f=c/a/2009/03/13/EDN616E8KB>
- Sloan, F., J.R. Ratliff, and M.A. Hall. 2005. Impact of Managed Care Patient Protection Laws on Health Services Utilization and Patient Satisfaction with Care. *Health Services Research* 40, no. 3, 657-67.
- Starfield, B., Shi L. and Macinko J. 2005. Contribution of Primary Care to Health Systems and Health. *Milbank Quarterly* 83, 457-502.
- Technical Review Panel on the Medicare Trustees Reports. 2000. Review of the Medicare Trustees' Financial Projections (December). Downloaded 2/28/2009 from <http://www.cms.hhs.gov/ReportsTrustFunds/downloads/TechnicalPanelReport2000.pdf>
- Volpp, K.G. and B. Siegel. 1993. Long-Term Experience With All-Payer Rate Setting. *Health Affairs* (Summer), 59 – 65.
- White, J. (Joseph). 1995. *Competing Solutions: American Health Care Proposals and International Experience*. Washington, DC: The Brookings Institution.
- . 1999. Targets and Systems of Health Care Cost Control. *Journal of Health Politics, Policy and Law* 24, no. 4.
- . 2001. National Health Care/Insurance Systems, in Neil J. Smelser ed., *International Encyclopedia of the Social & Behavioral Sciences* 4th ed. Vol. 15 (Elsevier)
- . 2007. Markets and Medical Care: The United States, 1993-2005. *The Milbank Quarterly* 85, no. 3, 395-448.
- White, J.S., R.E. Hurley, and B.C.Strunk. 2004. Getting Along or Going Along? Health Plan – Provider Contract Showdowns Subside. Center for Studying Health System Change Issue Brief 74.
- Worz, M. and R. Busse. 2005. Analysing the impact of health care system change in the EU member states – Germany. *Health Economics* 14, no. S1, S133-S150.