MEDICARE PAYMENT ADVISORY COMMISSION

PUBLIC MEETING

Ronald Reagan Building
International Trade Center
Horizon Ballroom
1300 13th Street, N.W.
Washington, D.C.

Friday, September 12, 2003
9:35 a.m.

COMMISSIONERS PRESENT:

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MR. HACKBARTH: Now we turn to our panel on growth in volume of physician services. We have two guests. Kevin, you'll do the introductions?

DR. HAYES: I will.

So just to set this up, we view this panel discussion as a way of kicking off our work on a chapter for the June report on growth and variation in use of physician services. This would be a follow-on to a chapter we had in the June 2003 report. And you'll recall from that chapter that we considered a couple of important issues.

One of the findings in that chapter was that we saw much variation geographically in use of physician services. And in interpreting those findings, we looked at the literature on the subject. In that literature, of course, we see some questions raised about whether that variation represents some unnecessary use of physician services and health care services in general in the health care system.

Another finding in the chapter was rapid growth in use of some services, such as imaging and tests. And there, when we tried to interpret those findings in terms of the literature, we quickly came upon this issue of technological change, the benefits of technological change, and how that has occurred with respect to a number of specific health care conditions.

And so putting those two findings together, and in trying to think about how Medicare payment policy might change, we see a dilemma here, a need to address what appears to be some waste in the health care system. And at the same time, if we're going to do something with payment policy, we need to do it in such a way as to protect and promote and so on the beneficial technological change that is obviously occurring.

We have with us today two panelists who have done research, must research, on these topics. They include first David Cutler, who was a professor of economics at Harvard University. And we also have Elliott Fisher, who is a professor of medicine and community and family medicine at Dartmouth Medical School and also a general internist at the VA Medical Center at White River Junction in Vermont.

And so, with that, I will turn this over to them. Elliott will go first. And what we're hoping is that we have presentations by the two speakers, questions and discussion to follow the two presentations.

MR. HACKBARTH: Welcome. We're familiar for me with your work and find it fascinating.

DR. FISHER: A pleasure to be here.

I'm a Mac person, so we may have to get David to drive over

here.

I'm going to try to share some insights from our work on geographic variations to help us think more critically about the causes of what we saw in our prior work, that is that there are regions of the country where there are both high cost and poor quality at the same time. That's consistent with the work in your chapter looking at the variations at the state level in quality and cost.

What I'm really going to try to do is very briefly go through our recent studies, share some data now based on analyses of national physician surveys done by the Robert Wood Johnson Foundation that are in a paper that we're preparing for submission. Anyone in the audience, don't cite it yet, please.

And then I'll think about how payment policy might help.

You're pretty familiar with our study. We don't need to go through it. We looked at about a million Medicare beneficiaries. We took advantage of the natural experiment that folks are living in different regions of the country which practice in different ways, in terms of the overall intensity of care in those regions.

This is a map of those regions. What you see is the red areas spend, in terms of the intensity of services and in terms of Medicare per capita spending, are about 60 percent higher in 1996 than the pale areas. This is exactly the same ratio that you see if you look at the data in terms of price adjusted spending, in terms of using RVUs and DRG weights as has been done in the previous speaker's talk.

The differences in spending are remarkably consistent across time. That is by 2000 it's still essentially a 60 percent difference.

Those population that we studied were really very similar in terms of their health status across the five colored areas, the five levels of intensity, quintile one being the lowest spending, lowest practice regions. And quintile five being the highest.

This graphs the predicted one-year mortality based on the clinical data that we had for each of these cohorts. And you can see that it's basically flat.

Let me summarize the findings, and I think it's the findings in the content and process of care that I really would draw your attention to and will come back to in the last bit of the talk.

We classify, we being at Dartmouth, and I work with Jack and John Skinner and others. We find it useful to think about three categories of care. Effective care, that is those things that we know really work in medicine and that all patients of a specific clinical type ought to get. Aspirin in the setting of the heart attack would be a classic example. Or a flu shot for an elderly patient.

Effective care, when you compare the rates of effective care in the highest compared to the lowest spending regions, you see that actually they're doing a worse job in the higher spending regions. That is on four of the six measures of cardiovascular quality of care drawn from the Cooperative Cardiovascular Project, care is slightly but significantly worse. And three of those four preventive measures that we have are worse in the higher spending regions.

Much to our surprise, the same is true for preference sensitive care. That is that it's basically flat across -- unrelated to differences in spending. Preference sensitive procedures are those which are discrete clinical interventions of well recognized benefit to patients where we argue because there are tradeoffs involved, that patients preferences are involved, and patients differ in their preferences for taking medication as opposed to the risks that may be associated percutaneous coronary interventions, that patient preferences should drive the decision.

Carotid endarterectomy would fall into that category. There's a risk of stroke at the time of the procedure. There's a choice that patients have to take aspirin or other platelet aggregation inhibitors. They ought to be presented a choice.

Remarkably, spending more, at least across geographic regions in terms of Medicare, does not result in more of these specific kinds of services. So they're not getting more of these discrete clinical interventions.

What are they getting? They get what we call supply sensitive care. These are services, these are fuzzy sets we admit, but it's things like visits, hospital stays, time in the intensive care unit, which have long been recognized to be strongly associated with a level of that particular resource in the community where the patient is receiving their care.

This just summarizes some of the data. If you look at the differences in spending, office visits are 40 percent higher in the highest compared to the lowest spending region. Inpatient visits are 2.2 times higher. Initial specialist consultations 2.5 times higher. Again, 2.5 times higher in terms of the number of patients who are seeing 10 or more different physicians. I'll come back to that.

I think they're much happier in the high spending regions because there are many more psychotherapy visits there, which probably improves the quality of life.

The diagnostic cardiology procedures are done more frequently. Imaging tests are done more frequently. People get many more of the procedures that are done by specialists. If you're having three times as many specialist consultations, you're more likely to get the procedures that a specialist would recommend because the specialist will want to understand and use the technology that they have at their disposal to try to work up the patient.

They spend more time in the hospital. And the overall intensity of care at the end of life is substantially greater. There are much higher rates of emergency resuscitation or the placement of vena cava filters, feeding tubes, and people spend about twice as much time in an ICU or a CCU before they die in a Philadelphia -- I don't know how many of you read the Wall Street Journal this morning -- as opposed to a Portland, Oregon.

This graph summarizes what I think is two important points. First, it reminds us, as you showed in your report in the spring, that most of the money is in evaluation and management services, imaging, diagnostic tests, and the minor procedures. Those are the upper four bars on the graphs.

The five groups of bars are the quintiles of Medicare spending. And what you see is there is a 5 percent difference, not shown on the slide, but the bottom blue bar which are major procedures, things like carotid endarterectomy, are only 5 percent higher in the highest spending regions of the United States than in the lowest.

The data is not shown there but the ratio for evaluation and management services is 71 percent higher. So there's substantially higher use of these imaging procedures, visits, diagnostic tests, and minor procedures.

Of course, the question is what does this lead to in terms of health outcomes and satisfaction? We actually looked. From the Medicare bene survey we had data on satisfaction. Folks in the higher spending regions are no more satisfied than those in the lower spending regions. There are no differences in the rate of functional decline in the Medicare population. And there's about a 2 to 5 percent higher risk of death in these chronic disease cohorts after adjusting for illness as best we could. But we had pretty good clinical adjusters in the higher spending regions.

So new data. What we see is higher spending in some regions of the country and worse quality.

Let me quickly go through the new data. I'm going to present a number of relatively disconnected observations and then try to put them together for you. As a clinician, trying to understand what on earth could be going on that we ought to be thinking differently about. Why are costs higher and quality worse in some regions?

I'm from Dartmouth. We make a big deal about capacity. And it's pretty clear that there are more hospital beds and more physician in these higher spending regions. And at least in the data we've got so far, they're not great benefits that are being achieved from having more specialists, 65 percent more medical subspecialists, and 30 percent more hospital beds.

When we look at these two factors together, what you see is something interesting. This graph is complicated, but let me walk you through it. If you stratify the country, there is great diversity across the 306 regions that we have. And we can group regions according to the quintile of hospital bed supply within which they fall. That is, areas with the lowest number of beds per capita, that would be the front bar on the right, the front group of three bars. Those are all regions that are in the lowest quintile of hospital bed supply.

And if you go from the lowest to the highest quintile of medical specialist supply, you get about an 18 or 19 percent increase in the intensity of services provided. Measured using DRG weights and RVUs.

If you are in the lowest quintile of medical specialist supply and give them more beds to work in, you get about an 18 percent increase in physician services.

At the back, though, if you're in regions that have the highest per capita supply of hospital beds in the country, and you increase the physician supply by just the same amount as when there are few beds available, here you get twice as much bang for

your buck. Or twice as much buck for the bang, maybe is really what I meant to say.

That is, you spend 34 percent more with the same increase in physician supply if there are lots of beds around for us to work in.

I think, making up a story here, is it fits with what we've thought of as the role of the hospital as the physician's work place. In sociology certainly that's been well recognized.

It may make us much easier to work if we can do that work in the setting of a hospital where we can order more tests more easily, we can perform the procedures more quickly, we can order more consults more quickly.

Of course, to make it add up, you have to go around the back. You get the same thing when there are lots of docs and you give them beds.

But the difference is exactly the difference we see in total per capita spending. If you look at these two factors alone, you get about 50 percent of the regional variation in per capita spending explained just on the basis of those supply factors. But that leaves 50 percent unexplained. So the glass is half full. It's an important factor. It's clearly not everything.

Here's some data from the physician survey of the community tracking study. And we compare the proportion of physicians in each quintile, we've assigned them based on their region of practice, to the same quintiles you saw before, so that we know that they're treating similar patients because the health status in the different quintiles has been shown to be similar.

And what you see is that a smaller proportion of them, 30 percent as opposed to 40 percent in the high spending regions, continue to offer primary care. It's a slight difference in the percent who are board certified or board eligible who are in practice.

There's a pretty remarkable difference, to my mind, in the number who are international medical graduates in those bright red areas on the map, 11 percent to 36 percent. And the proportion who are in solo or two-physician practices is also substantially higher, about 50 percent versus 30 percent. All of these track along with spending.

There are a bunch of other things we looked at to try to understand with are the attributes of physicians in practice in these regions. You don't see differences in age or gender. They're paid in pretty much the same way. They report that productivity affects their compensation similarly.

Penetration of managed care is similar, revenue from Medicare and Medicare are relatively similar. There is a 5 percent absolute difference, 40 to 45 percent, in the proportion of docs who say they have some role as a gatekeeper, primary care docs who say they have some role as a gatekeeper.

Thankfully, the Robert Wood Johnson Foundation including vignettes to let us understand whether physicians really practiced differently in these different regions. And what we see is there are six vignettes. One of them was whether you would refer a 50-year-old man with two millimeters of ST depression on his exercise test to a cardiologist. And it's

surprising that some people wouldn't refer everybody. But everyone's close to 90 percent.

But there still is a trend toward slightly more propensity to refer in the higher spending regions.

But for every other one of the vignettes, the differences are pretty dramatic and significant and clinically important. At the bottom there, the notion that a monogamous woman who calls, who has had yeast infections in the past, and now reports a yeast infection and you say you need to see them in your office rather than tell them to go to the pharmacy and pick up the appropriate over-the-counter medication for at least a trial, it's 60 percent of docs. 57 percent of docs in the higher spending regions will suggest that they have an office visit, as opposed to 45 in the lower spending regions. Greater propensity to intervene, to refer.

There also are some information about their perceptions of practice. They were asked I can make clinical decisions in the best interests of my patients without the possibility of reducing my income. 74 percent in the lowest spending regions, but it was 69 percent significantly different when you look at the test to trend.

The complexity of patients I am expected to provide care for without referral is greater than I'd like, 19 percent versus 31 percent.

A consequence, I think, of what we see is that the biggest difference in practice patterns that I believe we see is that it's about 17 percent of heart attack patients who see 10 different physicians in the first year after their heart attack in a lowest spending regions, but it's 31 percent in the highest spending regions. Who have 10 different physicians involved in their care.

Another consequence is they were asked about level of communication, whether it was adequate to support high quality care. The primary care physicians were much less likely to report that communication was adequate. Specialists were less likely to report that communication with primary care physicians was adequate. And they were less likely to say that it's possible to maintain the kind of continuing relationships with patients over time that promote the delivery of high quality care.

This is the one that David is going to have to explain to you. I'm not an economist, I'm a clinician. I'll make up a story about it and then David can help us think more clearly about it.

Physicians were asked could they obtain elective -- who thought they could obtain, when needed, elective hospitalizations, adequate length of inpatient stays, or high specialist referrals. Recalling that the highest spending regions have 30 percent more hospital beds per capita and that the populations have similar health status, they were much more likely to say they were having a hard time getting these services. They were having a hard time getting high quality specialist referrals, even though there are 65 percent more specialists.

Let me try to make up a story based on my clinical experience and how I look at this, to see if we can work our way out at least of the problem of why spending is higher and why quality may be worse in these regions. I think part of the story is obviously greater capacity. My explanation for why they perceive more difficulty getting inpatient stays is that there are more physicians, relatively, competing for -- yes, there are more beds. But there are relatively more physicians per capita in the higher regions than the compensatory increase in beds. So they're competing more for the available resource, because primarily there are more docs.

Fragmented care. It is pretty clear when you have 10 different physicians involved in a patient's care that it's going to be tough to have communication work or to ensure that we're doing the right things. Physicians are in small groups. There is a higher propensity of specialist care. And there are incentives for fragmentation in these higher spending regions.

If you pay on the basis of visits, you're going to get more frequent visits. And I think it's possible that the reason we see physicians wanting to refer patients more frequently, feeling constrained that they are having to manage patients without referral is that gee, if you're having a hard keeping your income up, when a patient develops a new problem, the easiest his way to manage that is you continue to manage the high blood pressure but let's get the joint pain taken care of by the rheumatologist in an evaluation there.

If you're very busy in your office, one of the ways of getting out of it with frequent visits is to say I've got a five-minute visit, I don't have time to talk about that, let's have you see the specialist. So I think there are some incentives for fragmentation that are present throughout but that are easy to address in a high spending region than in a low spending region.

Clearly, there's inadequate infrastructure throughout health care. But in two pursue groups or a single person practice, there's no way to communicate effectively with the other specialists that you're referring to other than typing a letter to them, which is really inefficient, even dictating a letter. Larger group practices are much more likely to have the information systems that support effective communication among physicians.

This is a whole literature on the coordination of care and how we improve quality in care, which is pretty well developed by showing that you need physician groups of a certain size in order to invest adequately in improving the information infrastructure.

And are incentives under the fee-for-service system, that most of these guys are operating under, reward quantity.

That suggests some general approaches. Reduce excess capacity, promote care coordination, improve infrastructure, and reward quality.

How can we help? How can payment policy help? We put out in the Health Affairs article last February the notion of comprehensive centers of medical excellence focusing an organizational accountability for costs and quality. I think it's quite possible, and we've got some data that now suggests

this pretty well, that hospitals and their affiliated medical staffs could form accountable units that could be held responsible for the cost and quality of care provided by that medical staff and to the patients who receive care there.

Most patients are highly loyal, especially once they develop serious chronic disease, are highly loyal to a hospital and to a care system. And then if that's true, we can measure the performance of these organizations on all of the key dimensions. We can reward patients for choosing them, reward were successful organizations.

Knowing what we know about capacity, the problem will be whether we in the United States can ever allow inefficient, low quality organizations to fail and close shop.

The fee-for-service system, a few suggestions, and these are just trying to think about what I saw, what we've seen in the data. I think to reduce excess capacity, CMS has some tools. It is remarkable that the red areas are where there are, in the country, the red spots, the hot spots are where there are a lot of residency programs. New York City trains lots of residents and I think they want to stay there.

So we need to think of some way of reforming graduate medical education to slow the growth, perhaps of the medical specialist work force. I'm not sure we need as many medical specialists as we have. But especially to restrain the growth in areas that already have high physician supply and where care is already fragmented. GME payments might be used to do that.

I think we have a problem of lack of primary care coordination. In our medical school fewer and fewer students are going into primary care specialties because the income disparities are so great. It's something to think about.

And then I think you could conceivably use the payment system to reward consolidation and downsizing in the hospital industry.

How can we promote care coordination and reduce fragmentation? I think rewarding the development of integrated medical group practices is something that is feasible to consider adding to payment system. I'm not sure how you do it, but that's why we're all here, to think about how you might do it.

I think we should develop bundled payments for care coordination, creating a payment bundle to support primary care, additional incentives that fosters better communication among physicians, and between physicians and patients. For instance, by paying explicitly for shared decision-making, reward patients for working through their primary care physicians somehow. The copayment structure could be different.

I think you have to create incentives for specialist generous collaboration rather than specialist/generalist fragmentation. Pay a specialist for initial evaluation only, not ongoing follow-up, but perhaps pay them to talk to the primary care physician.

And then improving the infrastructure and rewarding quality.

I'll stop there. Those are some of the ideas and I'm sure we'll have a chance to talk about them.

MR. HACKBARTH: I'd propose that we allow David to make his

presentation and we can have our discussion. David, do you want to go ahead?

DR. CUTLER: Thank you very much for inviting me here. It's a pleasure to be here. I'm going to start off by disagreeing with most everything that Elliott said.

MR. HACKBARTH: That's what we're looking for.

DR. CUTLER: But actually the most bizarre thing is, at the end of the talk I'm actually going to wind up at the same place he did. So one of us is taking the high road and one of us is taking the low road, but I'm not sure which is which.

So let me start off by just summarizing where I think Elliott left things. I actually don't disagree with any of the facts that he gave, that areas that spend more don't have materially better outcomes. That seems fairly clear. That there's direct observation not a lot of care is provided in settings where it's not needed or it's overprovided, that the total amount of overspending, according to estimates I think from Elliott and Jack Wennberg and John Skinner, perhaps 20 percent of Medicare spending. So the implication has been that payment policy should focus on restraining costs in high-cost areas, although that's not so much what Elliott focused on and that distinction is something that I want to come back to.

But I want to take a different road to get there is by saying, it's true that when you look at different areas over time, areas that spend more don't seem to get anything for it in terms of effective outcomes, health has improved immensely over time and medical care must have played some role in that. So I want to try and talk about that and to tell you what it is that I think we know from that and what we can conclude from that.

So I want to start off just by telling you a bit about trends in health. Obviously the people here know this, if anything, better than me so I'm going to go through this fairly quickly, in two dimensions. Mortality is the easiest. With the exception of certain professor friends of mine, you can generally tell if someone is alive or not. Whereas quality of life -- please don't repeat that to anyone. Whereas, quality of life is a little bit harder, but I'll tell you about some of those measures.

So mortality has declined immensely. The average American at birth lives about eight years longer than he or she did in 1950. That continues a couple of centuries increase in life expectancy; truly dramatic changes. At the same time, and this came up during Melinda's talk this morning, on an age-adjusted basis this is the share of the elderly with substantial impairments in either personal or living functions. So these are things like they can't feed themselves, they can't do their own toileting or bathing, they can't manage their own housework, things like that. It's declined by about 1 percent to 1.5 percent a year. So it used to be one in four elderly people had these impairments and now it's about one in five. The only question is whether it's speeding up or whether it's just a relatively common decline.

So by essentially all measures, people seem to be in better health. The question is why.

To tell you a little bit about that I will pick one particular example, which is cardiovascular disease. As I age this becomes increasingly more relevant to me just from personal use. The other advantage of looking at cardiovascular disease is that there's been a very large reduction in mortality over time. The red line up at the top is cardiovascular disease mortality which has declined by about two-thirds in the past half-century. The green line just a little bit below that is cancer mortality. In early 1970s, by the way, was when we declared war of cancer, which did not have such a major impact on cancer mortality. Then you can see all the other causes way down at the bottom are things like AIDS. We may soon declare war on heart disease and God help us then.

So let me tell you about cardiovascular disease. Since there's clearly something going on, one wants to understand what it is. The first thing to do is to translate that number. The typical 45-year-old will live about 4.5 years longer now than in 1950 simply because cardiovascular disease mortality has declined. That's almost all of the improvement in longevity conditioned on reaching age 45 or so. Not that that's the only thing that people die of, although it is the leading cause of death, but that's virtually the only one that has changed for people of that age.

At the same time, that person will spend a lot more. A fairly conservative estimate is that in present value added over the remaining life, the typical 45-year-old will spend about $30,000 more than he or she used to on care for cardiovascular disease. That includes the low-tech things that Elliott was telling you about. That includes various high-tech things. Averaged in there are the people who will die of cancer and not spend anything on cardiovascular disease. So there are a bunch of zeros in there mixed in with some people who will spend several hundred thousand dollars.

So what I want to basically do -- you know, I'm an economist and economists think about costs and they think about benefits. Occasionally they think about money, but more generally costs and benefits. So what I want to do is evaluate whether those costs and those benefits, how they play out.

The first thing I need to do is to tell you a little bit about that 4.5 years and what that came from. So there's some analysis that I've done. Let me just give you the bottom-line conclusion, which is that my guess is about two-thirds of those 4.5 years are a result of medical intervention. I'll just give you, rather than going through gory details of analysis I will give you two examples.

Franklin Roosevelt died in the mid-1940s. He died of a stroke. The reason why he had a stroke is because his blood pressure was at levels that are completely unheard of today, somewhere well above 200 and somewhere around 160 or 170. If you ask why he wasn't treated, it's because there was nothing that could be done about it. The leading therapy at the time -- there were some drugs which you basically had to be hospitalized to take because you got injections several times a day and they had all sorts of side effects, or else they would cut the nerves to

the blood vessels so that the blood vessels wouldn't contract so much. Or else they used fever, because it seemed like when you're focused on your fever you weren't so worried about your blood pressure. At least that's as best as I understand the theory.

So he basically died for

DR. ROWE: You went into the right -- you made the right decision about a career in medicine versus economics.

[Laughter.]

DR. CUTLER: My former dean at Harvard -- you'll know why I'm thankful he's my former dean, once said that if you stacked all the economists in the world end to end, that would be a good thing. I imagine the typical patient feels the same way.

[Laughter.]

DR. CUTLER: So I think we could cure him for about 20 cents a day today.

Dwight Eisenhower had a heart attack in the mid-1950s. He was visiting Denver at the time. The standard medical therapy was to keep the patient flat on his back in bed for six weeks; literally in bed six weeks. Gingerly transport the patient home, where he would stay in bed for six months. He would essentially not do anything productive the rest of his life. They actually brought in the world's most famous cardiologist to consult on this, a fellow named Paul Dudley White, who was one of the founders of the American Heart Association, and he experimented with a novel therapy for President Eisenhower. He allowed him to sit up. But the patient did not respond well so they went back to the traditional therapy for him.

Now Dwight Eisenhower seemed to recover fairly well. If you want to know what would happen today were he to have a heart attack, you should just ask Dick Cheney because he's had most of the things that you would do several times. The way that Dwight Eisenhower was treated would now be a malpractice suit. It actually turns out to be counterproductive therapy because you develop blood clots and things like that. So these are the sort of examples, the kind of intensive care both in the inpatient setting right after an acute event -- that's Dwight Eisenhower -- and the therapy outside of that, the Franklin Roosevelt care and the care for people with high cholesterol and other risk factors. Together that adds up to a lot of money, but a fair amount of the health improvements.

Then there's the remaining one-third which I attribute to various behavioral interventions. Not that those are independent of medical care, for example, doctors advising people about things and the Surgeon General advising people about things, but a somewhat different class of things.

So you get about three years out of that. Then the question is, are those three years worth about $30,000? Let me go fairly quickly through the answer to that. The example I want to give you is, are you willing to pay $300 for an airbag in a car? If you are, given the probability that an airbag saves your life, you value your life at about $3 million, because about one in 10,000 people will be saved by airbag in their car. So if you're willing to pay $300 to save one in 10,000, that's like paying $3

million to save one person.

It's easier to think about in terms of years of life, so for a person with 40 years remaining, that would be somewhere about $75,000, or let me take as a rough benchmark, a year of life is worth about $100,000. These are the kinds of numbers that people put -- for example, EPA puts when it does what would be the value of clean air improvements. You don't see this so much in court cases but in a lot of situations where you say, how much do you have to pay people to work in very risky jobs compared to safer jobs? You have to pay them a wage premium because people don't want to be exposed to risk. How much does that premium turn out to be? It turns out to be something like on this order of magnitude, how much are people willing to pay for safety devices.

You can do it with or without the numbers. You can ask yourself whether $30,000 would be worth an additional three years or you can take my estimate of the value of if. But one way or another it seems fairly clear that all that stuff has been worth it.

I estimate a return of four to one. That is not a return of 4 percent but a return of 300 percent. For those of you more comfortable with numbers than patients, that's a fairly high rate of return. All that's saying is that people are valuing their health quite a lot and when you develop ways that can improve health, people feel very happy about that.

I've done that for a bunch of different things. This is not all just me but a bunch of researchers. In all sorts of cases where you look you can see -- the cardiovascular disease example is the first row. I focused with Joe Newhouse on some of the heart attack stuff. In the second row there's some things on low birthweight babies. There's stuff about treating more people more aggressively who have depression; cataracts done earlier, at an earlier stage with increased visual acuity afterwards. Breast cancer and certain of the cancers are the only ones for which it's not obviously worth it, where we spend a lot more and it's not so clear we're getting much more. You can see that in the line that I showed you earlier.

But in the vast majority of cases we spend much more money than we used to. Why is that? It goes back to what Melinda was saying, because we do more stuff for people. It's not that we're actually spending more for the same thing, it's that we're doing more things for people and that stuff turns out, on average, to be worth it. I emphasize the on average because that's a key part here.

But people are valuing their health highly, so when we develop new ways that people can improve their health they like to take advantage of that, especially when it's other people's money, but even, this suggests, when it's their own money.

So what about all the waste? Let me come back and link up to what Elliott was telling you about. Elliott was focusing on some of the overuse of care. I gave the CABG example, although he was pointing out several other cases with less intensive care that are substantially overused. There's also an enormous amount of care that's underused. If you take all the people with hypertension even today, more than 50 years, almost 60 years

after Franklin Roosevelt died of hypertension, only one-third of people with hypertension are successfully controlled. Then there are all sorts of medication errors which generally fall in the category of misuse of care. That is frequently the misuse of care. That is stuff that should be done but not on that patient, or in the wrong setting or something like that.

Here's how I want to propose thinking about it, which is that traditionally the waste and value have gone together because of the way that we have reimbursed things. So I want to come into the payment policy, where you couldn't get rid of one without getting rid of the other. So I want to make a distinction here between the intensity of services and the value of services. The intensity is how much medical stuff is in it, ranging from the stuff that I could almost do, to the stuff that Jack Rowe wouldn't be caught dead having me do for him. Then the value of services being the things that's are really quite worth it, on the right, and the things that have relatively low worth on the left.

I wanted to think about different types of therapy. So the first one which is up here is things like health promotion, followup and monitoring dealing with patients who need referrals, or who need something very routine that even I could do. Relatively low intensity, frequently very high value because people have such difficulty using the system. That's one of the themes that comes out of Elliott and others' work.

A little bit further down are things like chronic disease management, figuring out what sorts of medications people with high blood pressure should have, what sort of screening tests, making sure that mammograms are read regularly. These are more intensive than Jack would want me doing, but not intensive enough to really need too much of Elliott's time.

Then down at the bottom are the various types of fancy things. So there's episodic acute and chronic care dealing with, let's say, surgery for people with severe coronary artery disease, or various kinds of heroic interventions that Elliott was telling you about. Those things are very, very intensive and they're sometimes valuable, sometimes not. Traditionally the regional disparities literature has focused down there, although it's increasingly starting to focus on some of the other things.

Now let me talk a bit about how payment policy fits into that. The traditional reimbursement system was basically a box like the green box that highlighted the stuff towards the bottom half of this figure. It said, look, if something is very intensive we'll pay more for it. It gets a higher RVU. The doctors will get a lot of money for doing it. And if something is less intensive, we either pay for it only very poorly or not at all. For example, having the nurse call the patient to check up on something is actually not an RVU code at all. You cannot get reimbursed for it.

I asked a bunch of doctors why they don't e-mail their patients and the most common answer is because I don't get paid for doing that. Not that it's technologically difficult. In fact I know one insurance company that wanted to -- one HMO that wanted to set up e-mail communication between the doctors and the

patients and the only thing they couldn't figure out was how do you get the e-mail to work so that only those companies that are willing to pay extra get to e-mail, their patients get to e-mail the doctors and you keep the other ones from being to do it because they weren't going to get paid for those other ones. So it's all an issue of money there.

If you think about that green box, that corresponds remarkably well to what was done. So down at the bottom right you have the very high intensity stuff that's worth it. That's the development of the surgeries for the heart attack patients, the development of the new pharmaceuticals to prevent risk factors and so on.

Down at the bottom left you have the things that Elliott was telling you about, the high-tech stuff that's wasted. Those are the ICU days and people who don't need it, the intensive interventions at the end of life for people who really would rather die quietly at home, the various other kinds of things. Those all count the same, or as I think about it, there are only two industries in the economy where you get paid for what you do, not how well you do it. One is health care and the other is primary and secondary education. It's no coincidence that those are the two parts of the economy where we worry the most about the quality of the services that we're getting.

A little bit up you had the disease management things which were reimbursed sort of okay. Seeing a doctor was generally reimbursed okay so you got to see a doctor. But the stuff above that reimbursed horribly so you didn't get very much about that at all. And the kinds of care coordination or lack of care coordination that Elliott was talking about fall in that upper category, and if you just look at the green box it's no surprise about that.

The thing that strikes me the most as an economist looking at health care is how important green boxes are for what's done, instead of -- in addition, perhaps, to medical textbooks. So the first we tried to do to change this is we decided to move the green box up a little bit. We'd make it a bit tougher to get reimbursed for the fancy stuff in managed care plans and we'd create a few more incentives to see the doctor in primary care settings by reducing the copayment rates, although we wouldn't actually give the doctor any time to see you. So it wasn't quite such an effective incentive.

We got basically what the shift would tell you, which is doctors tell you it's a little bit harder to do the fancy stuff, and they'd like to do a bit more and their patients would like to see a bit more of the other stuff, but fundamentally not enormously big changes. That's exactly what this kind of shift would suggest. As long as all we do is focus on moving the green box up and down that's all that's going to happen is we're going to add and cut out more valuable and unvaluable services. We're going to have them go together because that's fundamentally what the incentives are doing.

I think what we need to do is not actually shift that box up and down but to rotate it, and to think about a payment system that's not independent of the quality of the services but that's

very much dependent upon the quality of the services. So trying to distinguish amongst all that fancy stuff and amongst all the disease management stuff and say, look, those things that are contributing the most to improve health will get reimbursed more.

This is picking up where Elliott came out, which is rather than just saying -- and I think to great credit of him and his colleagues, rather than just saying, look, we know that services are overused in Miami, let's just take money away from Miami. They said, we know that there's high-quality stuff. Let's figure out how to pay more for the quality stuff. That's the implication that comes out here too.

There are various sorts of measures here. There are process measures, which might be appropriate for a particular physician such as screening, testing, use of effective services. There are actual outputs which may be at a somewhat more aggregated level. One would want to think of groups of doctors or potentially hospitals, or insurance plans as a whole. There are measures of patient satisfaction. I don't have a worked-out scheme here, but it's the concept that I think is the most important here, which is trying to introduce at least some payment based on that. Some of these things look actually quite familiar to what Elliott said, which I take as a good, not a bad thing. That is whenever an economist can agree with a doctor I think the world is probably happier, at lease the economist is happier.

So if I were doing something in the Medicare payment policy realm it would be to think less about the intensity of a particular RVU setting and more about the distinguishing sum -- taking a vertical slice rather than a horizontal slice and thinking some about what do we know about the quality of the services provided and how do we reimburse at a higher rate potentially through some kind of bonuses the higher quality care.

So as I said, it's a different road actually winding up at a fairly similar location. I'll stop here.

MR. HACKBARTH: Okay, let's open it up for discussion. David and Elliott, feel free to leap in at any point. Don't wait for somebody to direct a question to you. We're here to hopefully share in your expertise, so at any point.

DR. ROWE: First of all, thank you both. This is extraordinarily high protein content and really a pleasure for us, and in addition, very relevant to what we're doing here, so wonderful to have you guys. I have just a couple questions.

Elliott, I wondered a couple of things, and I've spoke with Jack about this in the past but I don't recall exactly where it came out -- whether or not you had data with respect to physician extenders? Because it seemed like the bigger doctor groups were in the lower cost, higher quality areas, and the more onesies and twosies were in the others. The way I interpreted that is they were more likely to have the advanced practice nurses who were in fact going to handle that phone call from that woman with that fungal infection and tell her to go to the pharmacy rather than -- because the larger practices have a little infrastructure and what have you.

So I wondered if you had data with respect to -- I just have three questions for you. One is data on physician extenders.

Then I have one question for David.

The second is whether you have data on capitation. California is the last area where physicians are really willing to take capitation these days and California didn't look like a particularly pale state on your map. That might tell you something, or not tell you something about funding mechanism and the surge -- puts the surge in and you might expect it to be a relatively low-cost area and it doesn't seem to be.

The third question is whether you had data for the VA? Since the VA is a national program, you work at the White River Junction VA with John Lawson and others, it's a national system but the funding is kind of uniform. The physicians don't have those economic incentives. Do you really have in the same areas that you have deep red, do those VAs have more cardiologists and more referrals, et cetera, or do those VAs behave differently? Because that would be -- I thought that would just be intuitively an interesting observation. So those are my questions.

DR. FISHER: Great questions. We don't have data on physician extenders I'm afraid. The Robert Wood Johnson survey does not, I don't believe it has questions about it, but it's an important question. Clearly, one of the advantages of the larger physician groups are exactly there are more people around to answer phone calls, they're much more likely to have electronic medical records, they're more likely to have chronic disease management systems in place. Tony Cassolino's work has shown pretty well that those are factors -- physician group size is associated with those factors.

So, no, we don't have that data but I would not be surprised if some of the reasons that the areas are able to maintain their low cost and perhaps higher quality is that there's little bit more invested in those factors. Although we do have from the survey, now as I think about it, measures of the relative preponderance of those quality measures such as electronic medical records, physician reminders, chronic disease management. Those are pretty similar across areas in terms of the proportion of physicians reporting having them.

The second question was about California managed care capitation. It is interesting to look at California. Northern California is a pale area and Southern California is a bright red area. The proportion of physicians in the RWJ data who report receiving some payments via capitation is relatively similar across regions of different intensity, different practice intensity.

The third question is about the VA, which is really very interesting. There was a paper by Carol Ashton and Melda Ray looking at regional variations in VA hospitalization rates for patients with chronic disease and they found, not surprisingly, the VA system has variations in the service use across the regions, the 23 service regions of the networks that are currently in place. Those differences are pretty similar to the differences you see in the Medicare population.

There are two competing explanations for the similarity. One which they put forward was that doctors are taught a practice style by their residency programs and this is what's going on.

The other is that it also happens that, by and large within the VA health care system, the areas that have lots of VA hospital beds and staff are in the old industrial Northeast where the population of veterans has declined. So Jack Wennberg's response in the editorial about the Ashton piece was, yes, but supply is important.

I think we'll end up discovering -- and this is conjecture, no evidence yet -- that the culture that evolves in a community is driven both by the numbers of docs and how they learn to practice, and then by the training effective coming into that system.

DR. ROWE: One question I had for David, kind of a high-level question. You look at cardiovascular disease, myocardial infarction, low birth weight babies, and you look at these improvements in disability and the cost and you say it was worth it, and it's hard to argue with that. But implicit in that is it's worth doing it again. That is, we made the investment, we had all these improvements, look what we got. We got 400 percent return. Therefore, you make the same investment again you're going to get another 400 percent return.

It seems to me that there is a limit to life expectancy. That there is a limit below which you're not going to go in disability. There is a limit in low birth weight infant mortality below which you're not going to go. Therefore we shouldn't necessarily assume that we can replicate this very exciting experience that we've had in mortality and morbidity over the last 30 or 40 years. Maybe we can. I just want to know whether or not we're making the assumption that we can as we address the questions that you're raising.

DR. CUTLER: That's a very good question. We sometimes think the future will be too much like the past and one can get in trouble there. Another way of phrasing the question is, what do we know about the technology of medical discovery and do we have any basis to believe that, for example, we've picked all the low-hanging fruit and now the remaining fruit on the tree are harder to get to. Everyone can have their own guess about that.

My own personal sense is that we probably haven't because the nature by which we discover new things is changing fundamentally. That's relative to the trial and error way of discovering things in the best it's a more scientific way and it will be with things like the genome and stuff. So that the things we're going to develop in the future have the potential to be just as consequential as the things that have come along in the past. Just as expensive and, at least I think, the potential to be just as consequential.

So I don't know that it's moving down a curve where first you undertake the high rate of return investment and then the remaining, but the whole schedule by which we, the whole means by which we discover things is changing.

DR. ROWE: You might be able to able to take some subsets like certain kinds of disabilities or certain kinds of neonatal things and actually analyze them and parse them into refractory kinds of things potential. Then you might actually be able to generate some --

DR. CUTLER: Yes. It's very clever for some things, like the infant mortality. In fact we continue to make improvements in low birth weight infant mortality, but because the mortality rate is so close to zero those aren't translating into as big changes in life expectancy. So what it will really have to be is partly other sorts of things like, for example, new types of cancer therapies and stuff that we haven't been successful at in the past. I'm not quite the person who would know for sure whether if you looked at it those have the promise to be as fundamental as the things that have gone on before, but my rough reading suggests that there's reason to believe it might be.

There was an issue of JAMA early in 200, 2001, I think it was February of one of those years, on the prospects for medical innovation in the coming 25, 50 years or something, that went through field after field and tried to lay out what they thought was possible. Nobody went and added those up and said, okay, if you took half of this what would you get in terms of outcomes for anybody? But that would be the kind of exercise that you're suggesting. That would be very important here.

DR. MILLER: Can I just make one point on that? The way I was thinking about this is less the notion of, where are we on the curve as, if you agree with four to one, and if I follow the notion of turning the box on the side, the question that might be more achievable is, why isn't it six to one? Could you get the same result with fewer resources?

DR. CUTLER: The answer is, absolutely, we could have gotten the same result with fewer resources. Or if you account for the services that are not provided to people, for example, the hypertension therapies, the care for depression and so on, that would have cut into that. I have no idea whether if we got rid of the overused care and we provided the underused care we would spend more or less. I suspect we'd spend a little bit more, maybe half as much as Elliott thinks we'd save in getting rid of the overuse we'd spend in reducing the underuse. But the net impact would have been much, much higher. That's the sense in which we're really far inside what we could be doing. We're far below what we could be doing.

The statement that it was worth it on average is not a statement that everything that we did was worth it.

MR. FEEZOR: Just to follow a question that Jack raised. I found some interest in California on your chart per capita spending being particularly heavy in L.A. because that is an area that at least in terms of the CalPERS under-65 population there is significant less spending there. In fact by about 18 percent. Even when you correct for the demographics it's still in the neighborhood of 11 or 12 percent. So I guess I was a little surprised at that -- literally, it is almost reversed and in fact my expenditure pattern in the Bay Area where you do have it slightly darkened, is that way, and certainly Sacramento in the red speaks for itself. That's fairly famous and that's reflected there. I don't know why but I'd like to look at that a little bit more at some point.

DR. FISHER: One hypothesis would be that if there are real constraints on what the physicians can do in the under-65

population, that the relatively unfettered fee-for-service Medicare population is how one balances one's books.

MR. FEEZOR: That's got to be it because it is the Southern California basic that my large medical groups were most willing to be very competitive in dealing with my third-party payers; very, very competitive.

DR. NEWHOUSE: Let me echo Jack's comment about the presentations. I guess another way to put David's response to Jack was the quote from our report of 1945 that there were no diminishing returns to knowledge generation.

I had a second order response to Elliott. Since David didn't rise to the bait about explaining the elective hospital admissions, I will. Although I wondered -- I believe, am I not right, that the community tracking survey responses by the physicians are not Medicare specific? So this is a speculation now about what could explain it, that managed care is much more prevalent in the high-spending areas than the low-spending areas, probably for causal reasons, and that what you're seeing in those responses is a backlash to managed care. That they were saying they were having trouble, or more of them were saying they were having trouble getting admissions in, getting length of stay, getting referrals and so forth. So that's a thought.

The other remark I wanted to make -- two other remarks actually. Elliott and David's policy conclusions, while there was certainly some overlap, didn't fully agree. That is, Elliott emphasized controlling growth of specialists and decreasing hospital beds in the high-spending areas. Emphasized may be overstated, but he brought them up.

I would have said I don't really quarrel with the across space variation point but the real issue, which is almost an impossible issue I think is, what do we need 20 years out in the way of specialists? The reason it's impossible is that we don't know what the technologies are going to be. If we put ourselves back in 1970 and ask what we would have projected as the need for interventional cardiologists we'd have probably blown it. Similarly, in the 1950s projecting nephrologists, we'd have blown that one too.

My concern would be that we not put something in place that goes at this that somehow gets in the way of a response that we will need over the lifetime of the physicians and the hospitals looking to the future.

I guess I was going to make some remarks about paying for quality but we've covered that in the June report and I'm sure it will come up in the future, so in the interest of time I'll stop.

MR. HACKBARTH: Any response?

DR. FISHER: A couple of points. One is that the analysis for physician perception control for any of the managed care penetration variables that we have on the physician, so I don't think it's just managed care penetration. Actually, the only variable in managed care penetration that is really even moderately different is the proportion who say that they're captitated, and that's a small relative change in controlling for it. It leaves the effect still in place.

I think the second point about physicians and the numbers of

physicians and hospital beds really speaks more to the quality problem than to the cost problem. I believe that they contribute to higher cost, but as I look at the information we have I'm much more worries about their impact on quality. What we know about, at least from some analyses I've seen done by one of my colleagues, David Goodman, who worries a lot about the physician workforce, is you have to add four physicians to every one of the high physician areas before one moves to Iowa. So simply allowing the current system to remain is likely to exacerbate the disparities in specialist supply that we see.

I don't see evidence that the greater specialist supply is leading to better care. I think there's some good evidence that specialists, working together with primary care physicians, do contribute to improved quality, and for heart attacks is where the evidence is best. But those studies don't look at whether having 10 docs involved in your care is better for you than having four, and that's the major consequence.

So I think we need to at least consider, both for the sake of costs and for the sake of improving quality, where do we want our specialists and how many do we want. Whether the policy response to the unpredictability of where we need physicians is to either constrain or expand in an unlimited way the physician supply, I think neither of those are the right answer. The right answer is a way of retraining physicians in specialties where they're needed rather than leaving them there doing things which are outdated and not necessarily beneficial.

DR. NEWHOUSE: If you constrain the total number of specialists actually they'll fall out of the low-rate areas first.

DR. FISHER: I agree there are some risks and we have to think about how to do it right.

MR. MULLER: I too share the sense of how well this work is done. One of the ways in which I think the two may have come together that I'd ask you to comment on in terms of policy implications is to -- you brought up the notion in your article on accountable units. As one thinks about enhancing quality, both in terms of quality control, cost control, specialization control and so forth, could you comment a little bit more about what kind of a accountable -- obviously one is a hospital. That's the classic one in the American setting, big, large group practices and so forth. But both what kind of accountable units do you see that we'd want to encourage, and secondly, what kind of incentives would you want to give those accountable units?

DR. FISHER: I think that there's a fair bit of data on the challenges of measuring individual physician performance, both in terms of case mix adjustment and in terms of just adequate numbers of patients to be able to up with stable estimates of quality. That may not be true for satisfaction because a physician will have enough patients in their panel to measure the satisfaction of those patients. But the real rationale that I see for fostering the growth of integrated delivery systems or physician groups that are affiliated with hospitals, is that I believe that that's the right size where you can learn what's going on in the process of care that leads to better outcomes and

improves the quality of care. That they'll be big enough to justify the investment.

So I think it was Mark's early work in the late '80s or early '90s about medical staff, whether the medical staff of a hospital isn't one way to think about paying for inpatient services. But I think since we're, in the absence of managed competition a la Alain Enthoven where everybody signs up for lovely, fully integrated systems, that measuring the performance of specific hospitals and their medical staffs and reporting both their efficiency, which varies dramatically across institutions, and on their quality, would provide additional information that might allow you to both encourage those hospitals to improve both efficiency and quality and be big enough to evaluate, be big enough to look at outcomes.

AMI, heart attacks, judging the quality of heart attack care is all about how do the physicians and hospital system work together to ensure that the patient when they get to the emergency room gets their aspirin and gets to the cath lab quickly if they've got one, or transferred to the hospital that has one if they don't have one. So that's my accountable care unit, accountable care organization.

DR. CUTLER: I think there are different sorts of measures that can be used at different levels. It's obviously easiest when one thinks about a bigger unit. Beyond a hospital there would be a health plan, for example, either in the private sector or as Medicare pays HMOs or something.

But I think one could even think about it in physician payment, to link it to the previous discussion. I occasionally muse over, let's say if you just took the Medicare beneficiaries -- Nancy-Ann may know the answer to this. If you said, of all the Medicare beneficiaries who go to a typical physician, what share of those beneficiaries is there some measurable process that the physician should have taken that we can see, did the physician do it and count that positively or negatively towards, let's say a score for the physician? My guess, it may be half, one out of every two patients, one out of every three, one out of every two patients there's something that the physician should have done. Not that it's always the same. Not that you're going to develop one measure, because you're not going to have enough patients with any particular thing, but if you aggregate it across things.

So it may be that there's actually a large enough sample at the individual physician level to say, even if one is Medicare we can come up with a measure of how well that physician is doing at a process level. I don't think at a particular physician level you could do outcomes. As you get bigger one could think about doing that for groups of physicians.

DR. ROWE: Did the recent research show 55 percent?

MS. DePARLE: Yes, Melinda's colleagues at RAND. That was Medicare data.

DR. ROWE: So about 55 percent of the patients receive the whole evidence based thing.

DR. REISCHAUER: Thank you both for coming. This is very interesting. I have a small methodological question for Elliott.

I might have asked this before to you. When you were dividing the HRRs by per capita beds and per capita physicians, was the per capita total population?

DR. FISHER: Yes.

DR. REISCHAUER: So that captures some of the questions that you --

MR. FEEZOR: Total Medicare population?

DR. REISCHAUER: No, total population.

My question for you, David, is whether in a fee-for-service world there's really a practical way of twisting the box and moving it to the right. To use your technical language, there's some stuff that is ineffectual for everyone, and clearly getting rid of that is an obvious way to save money. But my understanding is the problem is that most stuff is effective for some and not effective for others, and ex ante, it's often difficult to decide for whom it will be effective. In a world like Medicare, you can't really use averages. If there's any even modest group, if for 5 percent of the people it's effective, politically it's very hard to deny it to the other 95 who believe for them it might be effective.

Do we have any kind of work that is trying to see for various procedures, particularly the fancy stuff that is expensive and on average has low value but for a very tiny fraction has high value, whether we can ex ante identify those people?

DR. CUTLER: Let me give two answers. I'm not sure you'll like either but let me give two strategies. The first one is -- the first simpler one would be, rather than having just one RVU which is the same for everything, but add another layer which is based on, in essence, the diagnosis of the patient. So think about introducing a DRG-type adjustment into it.

What it would do is that, let's say you'd you would count an RVU higher if it was done in a situation where it was clearly appropriate. So let me think if I can do a specific example.

If a patient has diabetes and you order every three months the HBA1C or the retinopathy, you do the pulsar testing in the feet and other extremities, that would be a higher RVU than if that were done but not for a diabetic patient, or if it were not done. So the RVU would depend upon the diagnosis of the patient and whether that was clinically indicated or not, or whether based on guidelines we judge that to be appropriate. So that would be the individual for that encounter, the payment for that encounter differed.

The second way to do it -- by the way, at the hospital level what you think about is something like introducing into the DRG payment something about either the quality in terms of the -- there you'd really have to do the process. So for example, if there was the evidence that a beta blocker was prescribed or aspirin was prescribed, then the DRG payment would be higher. So just as distinguish them now between surgical and non-surgical and complications versus not, you'd add a little bit of payment there based on the process measures of what's done.

The other way to do it is to think about an annual bonus system with everything that's done contributing to points during

the year. So at the hospital level it would be, every time the heart attack patient got the beta blocker and the aspirin that contributes a certain amount of points. Every time that the physician did the cholesterol screen and prescribed a medication which was appropriate you get a certain amount of points. Then at the end of the year you'd take the points, normalized somehow based on how many you should have earned or whatever, and you'd allocate some additional payment based on that. So if you hit 100 percent of the possible points, maybe that would be a 10 or 15 percent bonus for Medicare. If you got half that, maybe it would be half of that set of points. That would not be on the individual patient level.

There you could think about doing some explicit outcome-based payment. It would be easier in the hospital setting, like for example, with the AMI patients. New York State has a long history of CABG reporting so you could actually use those kind of risk-adjusted measures in the payment for the hospital overall for that year. Rather than just measuring it and putting it out, you'd actually have some of the payment conditional on that. But you couldn't do that for any particular patient. You'd have to do that based on the characteristics as a whole.

DR. FISHER: I'd like to put my two cents in. I think rewarding quality to the extent we can define it clearly is an excellent idea and I think one of the challenges is that even as NCQA struggles to develop good, precise measures of high quality of care is, or RAND, there are not that many things that are going to be easily identified and tracked that we should reward. We should try to do it, but we shouldn't count on it to fix the problem of difficult decisions and the gray areas about the use of this advanced technology.

I think there are two issues that I think should be distinguish that may point both to the same answer. That is there's the question of what's the right decision for that particular patient. There are certain risks -- take implantable cardiac defibrillators, for example. Expensive technology. Our vice president has one. We all might want them sooner or later. But making the decisions about who should get one and who really stands to benefit as opposed to who is going to have their life prolonged with end-stage heart failure and die of suffocation as opposed to die of an arrhythmia, which the arrhythmia is the preferred way to go if I'm given a choice. So the decision-making is difficult.

We ought to try to ensure that when it's these expensive high-stakes decisions, bypass surgery would be a good one, elective angioplasty would be a good one, that we pay real attention to helping make sure that patients are involved in the decision so that they understand the choices and there's informed patient choice and we ought to pay for it. It's not going to be that hard but we ought to make sure that physicians are rewarded for adopting nationally-validated protocols that ensure that patients get balanced information on the risks and benefits of these procedures. I believe there's tremendous overuse, and Brooks has shown it to be 40 percent or greater depending on how you define it, in the use of these major procedures. Those are

people who if well-informed might very well choose differently. The randomized trials on shared decision-making protocols suggest that patients choose more conservatively than their doctors recommend generally.

Second related challenge is the problem of patient safety. That is, I'm not sure that we know quite well, as David pointed out, volume makes a big difference, but volume is only one of the predictors of poor outcomes and doesn't explain variations in cardiovascular mortality following bypass surgery.

There are things about the quality of the organizations. While it may not be particularly easy, but the model of centers of excellence where we will pay for the procedure in a center of excellence but not in a place that does 20, or in Reading, or in the new cardiac hospitals that are expanding, we ought to think carefully because that would do two things. That could allow us to improve the decision-making because those would be places that would be making wiser decisions and those would be places where you could be sure that the outcomes were better so the patient has a chance to benefit.

The data on many of these procedures is that if they're done in a place that is not high-quality with good outcomes, the benefits were flipped so that it's on average harmful. The carotid endarterectomy data is quite clear. So those are two suggestions that at least -- thinking about centers of excellence is a strategy for helping improve decision-making and outcomes I think might be a useful tool.

MR. HACKBARTH: Unfortunately, we're running out of time. And I have two commissioners remaining on my list, Alan Nelson, Nancy-Ann and then we'll have to close it.

DR. NELSON: Add my thanks. Two questions, Elliott. One, there are some areas that are conspicuous in the low per capita spending areas that have relatively high specialist population ratios, Portland, Salt Lake City, Denver, for example. Any explanation there?

The second question is, is there any correlation between per capita spending and the degree of penetration of for-profit providers, hospitals, nursing homes, home care and so forth?

DR. FISHER: Thank you for the questions. There are certainly areas that have lots of specialists per capita. The Portland area is -- one of the important things to recognize is that places like Iowa and Portland I believe may have high concentrations of specialists within the particular area. Iowa I know better than Portland. But they do a much better job of distributing the specialist services across the population of other surrounding hospital referral regions. Our measures of specialist supply are not allocated. They're within those areas. So that if a region does a good job within, as in Seattle and Portland, a good job of allocating the specialist's time across the entire region they may look high in specialist supply but low on per capita spending on the residents of that specific region.

Now the second question, for-profit. John Skinner, Elaine Silverman and I did a study of for-profit hospitals and both the absolute levels of spending in the areas that have for-profit hospitals and the growth in spending were higher. We published

that in the New England Journal three years ago I think.

MS. DePARLE: I note you agree on centers of excellence, both you and David agree that that's a good idea. That's two votes, and I think more than it's ever gotten at the other end of Pennsylvania Avenue, so on that hopeful note --

DR. CUTLER: Didn't we do that with heart transplants?

MS. DePARLE: I was going to say, I think it's a great idea and we have had some success. We did a demonstration. It's been discussed here a number of times. But also you could analogize, with some caveats probably, to the transplant program as well, with some success. One could argue about whether we did a very good job of the criteria in the beginning, but at least we've said this is important, it should have happen, but it should only happen at places that have shown they can do it effectively. I think it's worked pretty well. I'm only sorry that that model is not more widely accepted.

Elliott, I've heard you talk about this twice now in the Washington policy halls, but I am curious as to the reaction you get. Have you done this talk on the Upper East Side, or Boca Raton, or places where there's high utilization?

DR. FISHER: I have given the talk on East Long Island which another little red spot on the map, but I frame the talk around, it's all about quality. There are good theoretical reasons to think that more medical care can be harmful, and Gil Welch and I wrote a piece summarizing the mechanisms of harm from too much medical care. I think physicians get it.

My experience there was many of them felt constrained by the way the payment system worked to keep doing what they're doing rather than take the time to think, talk to patients long enough to be able to persuade them that they didn't need the specific intervention that was advertised on television. That's why I focused in my suggestions on at least thinking about the care coordination and management part more explicitly so that patients have someone who can really provide them good information about whether they should listen to that ad.

MR. HACKBARTH: Nancy-Ann, do you think it makes a political difference if things are constrained at the front end as opposed to after they've diffused everywhere?

MS. DePARLE: Definitely.

MR. HACKBARTH: So if you tie the limitation to the initial coverage decision, say we're only going to pay for this at certain places, you may have a somewhat different dynamic than if everybody is invested in the service and then you say, we're only going to pay for it at a few places.

MS. DePARLE: Everybody has invested, and by the way, it's the highest DRG. Yes, I think that makes a difference. I don't have the history. Sheila and Senator Durenberger may, and Mark you may. But with transplants, it was a number of years before Medicare covered them and then when it did cover them it launched this program and I guess that was in the law. But, yes, I think that's a good model.

DR. CUTLER: I think the example that Nancy-Ann brought up, and the more general of the difficulty of regulation I think highlights why the payment structure may be useful. That is,

it's very hard to tell a hospital that's not doing well that you're going to deny payment there. But it's easier just to say, on the basis of outcomes you don't get any bonus and if you can't meet your cost that's tough. You just should stop providing this. That's your decision to do, and it's not my decision to take it away from you. The other hospital down the street that's doing it much better is going to get more money for it, but that's just the way that it is.

So I think even broader than just Medicare, all the certificate of need stuff largely failed because we didn't have the willpower to tell anyone to do anything. But when it gets to be financially appropriate or inappropriate then we really see more action. That's partly why I focused more on the payment side than on the regulatory side.