

2013 MacEachern Symposium:
On a Collision Course? Health Care Integration and Antitrust

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Malcolm T. MacEachern Memorial Lecture:
"The Three Ws of Consolidation and Competition in US Health Care"

Dranove ... to the program know Mark for many great things. His research is very far-reaching on theories of bargaining and price competition. But he's also been a part-time health economist, and he had the distinct pleasure of being Marty Gaynor's Ph.D. dissertation supervisor. So I'm going to turn it over to Mark.

Mark Actually I wasn't his supervisor. I just helped my colleague. But it's just such a pleasure today to introduce Marty, to have him as the speaker for the Malcolm MacEachern Memorial Lecture.

Let me tell you a tiny bit about Marty. Since 1995, he's been the E. J. Barone Chair of Health Systems Management at Carnegie Mellon. He's a very distinguished health economist. If you look at his vitae, he's won the full clutch of prizes: He's won the Victor Fuchs Research Award; he's won the National Institute for Health Care Management Foundation Research Award; he's won the Kenneth Arrow Health Economics Research Award.

Now I'm going to make two substantive points about Marty, beyond the fact that he's really one of the most prominent health economists in the country. First, unlike most of us, he's not completely U.S.-centric. He's spent a good bit of time and effort looking at the United Kingdom's National Health Service. He's examined the effects of competition in the U.K. Good or bad, Marty's shown competition can have effects.

And second, Marty is engaged in an effort to really help the infrastructure of what we know about health care. He's the founder and the chair of the Health Care Cost Institute, which has enlisted a set of insurance companies to allow us to look at the data that they have. It seems sometimes the only thing we know about health care, as economists, is what happened with Medicare or Medicaid, even though most of us, especially during our prime years, have

used private health insurance. Marty would like to cure that, and I wish him the greatest of luck on it. So Marty, the floor is yours. Thank you for coming. I can't wait to hear what you have to say. [Applause.]

Gaynor Thank you very much, Mark. As long as I don't have to answer questions about my dissertation, I'm a happy camper. [Laughter.]

Well, first let me say that it's a great pleasure and an honor to be here. I did get my Ph.D. from the Economics Department here at Northwestern back in the Cretaceous period. [Laughter.] The campus and Evanston have changed a little bit since then.

I think an important thing for people to know about Northwestern – you probably know this already – is that the lines between units at the university are really very permeable. And so while I got my Ph.D. from the Economics Department, I really also considered myself a part of Kellogg. Mark was on my dissertation committee. The Center for Health Services and Policy Research, headed by Ed Hughes, was a home as well. All of those entities played very important parts in my formative years. I'm very grateful to all these individuals, the units, and the university.

I also want to emphasize something that David said. Northwestern, for many years, but really I'd say at least for the past 15 to 20, has been a center for intellectual leadership, intellectual thought, and research on health care markets and policy. If you look at important ideas, research evidence, and Ph.D. student work in this area, you see how intense the representation of people with some kind of Northwestern affiliation is. So this is a very appropriate place to have a symposium on this topic and have a discussion as well.

I think we've had some great and very thought-provoking presentations this morning. A lot of them have been terrific and covered lots and lots of facts, very close to the ground facts, and that is really great. I really enjoyed learning them. My presentation will be a bit of a departure. It will cover the kind of work I do as an academic and as an economist. I work in the area where the rubber meets the sky. [Laughter.] So I'll be giving you facts, but they'll be at a fairly high level and taking a fairly broad view of things. I hope there will be, in the aggregate, a connection between all the presentations here that helps to make some sense of things.

Before getting started on the formal part, let me at least attempt a joke. I think it's always good to intersperse the serious stuff with a bit of levity. I was thinking, well, what can I do that might be entertaining? Well, I'll try an economics joke, right? All of you have been exposed to economics, and I'm sure all of you enjoy it greatly; you had great teachers like David and Mark here.

Now this may surprise you, but there are not a lot of economics jokes out there. Among those, the number that are funny is, shall we say, a proper subset. I thought, well, OK, economics joke. I should find a health economics joke, right? Well that's a bit harder to find, but here's something that at least has economics and health care. So here's how the joke goes. I hope you'll find it amusing.

So there's an individual and it's time for their annual physical checkup. There's the whole kind of thing: poked and prodded, tests, etc. As you know at the end of the physical, you sit down in the doctor's office and the physician comes in and gives you a report. So the patient is sitting there, and the physician comes into the office, closes the door, sits down behind the desk, and says, "Well, I now have the results of your physical. We have all the tests back in, and I have some good news, and I have some bad news." And the patient says, "Well, tell me the good news first." And the physician says, "Well, here's the good news. You are in absolutely perfect health, except for one thing." The patient says, "OK, what's the bad news?" And the doctor says, "Well, the bad news is that one thing is that you have an incurable terminal illness, I'm very sorry to tell you, and you have six months to live."

Needless to say, the patient is rather distraught. This was unexpected news, and he is finding this rather difficult to accept. So the patient says to the physician, "Gee, doctor, I understand this is terminal and incurable, but isn't there something that I could do that might cure the illness or extend my life in some way?" And the physician says, "Well, as you know, there's no known cure for this. There's really nothing I can think of." Then the patient says, "Please, doctor, please, think if there's anything. Look, I'll try anything, right? I only have six months to live. What do I have to lose?" The physician thinks and thinks, goes and looks in a bunch of books, etc. Finally he comes back to the patient and says, "Look, there's one thing I think you could do." The patient says, "Thank you, doctor, thank you. You're so wonderful. I'm so appreciative. You've got to be the best doctor anywhere in the entire world. Now, could you please tell me what it is?" The doctor says, "OK, here's what you need to do. Marry an economist and move to Montana." The patient sits there for a minute in utter shock, as you might imagine, and finally says, "Doctor, no disrespect, but how will marrying an economist and moving to Montana save my life?" And the doctor says, "Oh, no, it won't, but it will make six months seem like six years." [Laughter.]

Don't ask my wife of, what, 26 or 27 years? I should know.

All right, let's get on to the more serious stuff here.

As you know, the United States relies on markets for the provision of health care and financing. About half of all care financed in the United States is

private. As you've already heard, and I'm sure you were aware, those markets don't work as well as they could or as well as they should. What I'm going to tell you – and provide evidence to back up – is that the consolidation of markets is a big reason why they are not functioning well. But they're not the only problem. These problems are not simple by any means, but I think they have a large part to do with why the markets aren't functioning as well as they could.

So here are the issues: We have high prices, and those prices are rising. We have quality problems. There's too little organizational innovation. We have a very rigid set of organizations. Service is not always what it could be. Outside that we're good, right? Well, market concentration is partly why more of this is happening. The rest of the talk is organized into three Ws, just like World Wide Web – or maybe it was what Curly and the Three Stooges always said, "Whoop, whoop, whoop." But this is a little more serious.

What's going on? And who cares? I can give you a bunch of facts, but you should always be asking the question, "Who cares? Why is this important?" Otherwise it's a random collection of facts, and while that might be great for Trivial Pursuit, they have to have some meaning or some reason we should care. Last and most importantly, what can we do about it?

So let's start with "what." As you know, health care spending is high and increasing. We're spending about \$2.7–\$2.8 trillion a year. I mean, there's a little round-off error of a hundred billion dollars, but yeah, I'll take that.

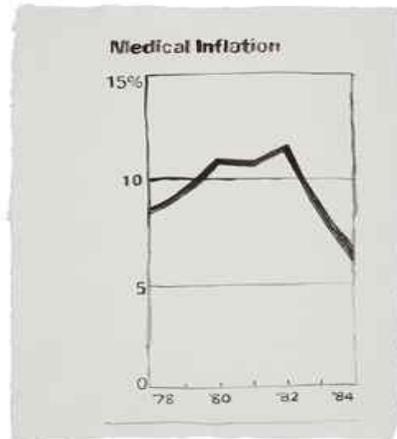
I think we're pretty much in universal agreement that this cannot be sustained without serious strain or harm to our society. It's a drag on the economy, it's a burden for future generations, and it is indeed a serious problem. In the past couple years there has been a slow down in the rate of growth of health care costs. Whether that reflects an underlying structural change, so the rate of growth won't start trending up again, nobody knows. Some have claimed that there is a real change. On the other hand, there's an expression, "If grandma had a beard, she'd be grandpa." So it may be permanent, but that also may simply be wishful thinking. Every time there's been a downward trend in the rate of growth in health care costs in the past, the rate of growth has gone back up again.

Prices are an issue. Interestingly enough, after decades of health policy people ignoring pricing and health care markets, those prices and markets have become front and center as a major issue to both policy people and the general public. I think it's about time; better late than never.

Prices are a major driver of health spending increases. I'll show you some evidence on that. There are concerns over quality. AHRQ has issued a number of reports; there's been a lot of discussion about this kind of thing.

There is, this is a little harder to characterize quantitatively, there's also concern about innovation. Not technological innovation; we have proton beam therapy out there, we've got all that Buck Rogers and Star Wars stuff. It's not that. It's organizational innovation that's lacking.

Now this is not a new problem. This is an actual drawing by Andy Warhol — who, by the way, is a Carnegie Mellon alum, from 1949. He's from Pittsburgh,



and the cemetery where he rests is actually, I don't know, a mile and a half from my house.. This was done about 1985–86. I did check, and the data point for 1978 is accurate so far as I can tell. The others I have not checked. This was on sale at Christy's auction house for about \$15,000–\$20,000. I tried to persuade the provost of the university and the dean of my college to purchase it. They didn't return my emails. I don't know why. I'm not joking. I think this would have been a great acquisition.

I talked to my wife, who didn't actually laugh in my face, about this. I don't know where it is now, but it is something that has been the object of interest. Andy Warhol was an artist who tried to portray things that were part of real life. You might be asking, "Why is he talking about this?" I know next to nothing about art. But this is consistent, I think, with the efforts on Warhol's part to try and capture things that are important parts of daily life and of culture.

There's been a lot of publicity about prices. We've already heard about the article by Steven Brill in *Time* that documents lots of specific examples of egregious pricing practices. The Centers for Medicare & Medicaid Services – and notice that actually it's CMS, not CMMS, and that's because they are dedicated to reducing the tax burden on the citizenry in the United States. Think of all the paper stationery they have to print with just one "M" instead of two. This is your government working for you, so be very grateful. Anyhow, CMS has really stayed on top of charges and Medicare reimbursements. Specifically on outpatient payments, which were the topic of a report they released very recently.

So again, after pretty much just ignoring pricing practices in the health care sector for decades, all of a sudden now it's very, very popular. David Dranove cannot walk down the street in Chicago without having the paparazzi trying to snap his picture. [Laughter.] He's used to that. What are you going to do?

Here's the Brill article on the cover of *Time*. Here's CMS charge data. On the left is a screenshot from the CMS website, which is just as easy to navigate as everything else. [Laughter.] Actually it's a lot easier to navigate than some other things. There's a little map of what's going on in Chicago.

This is from the *New York Times* article. You can see angiogram prices are about 26–27 times higher in the U.S. than in Canada. I don't vouch for the accuracy of this. I'm just telling you, look, this has been getting a lot of attention. Look at those numbers: \$914 versus \$35. But we're not 27 times richer than Canadians, eh? [Laughter.]

So what's driving spending? Well, spending is simple, right? You don't even need an economics class to know that spending is just price multiplied by quantity. So is the driver of spending price or quantity?. You can also try to look at the intensity of care in this sector.

Mark mentioned the Health Care Cost Institute. This is our website. David Dranove is also on the board of the Health Care Cost Institute and plays a very important role. If you're interested, there are a number of reports and information that might be of interest to you on our website. This is from one of our reports, in which we use data from insurers representing about 40 percent of all privately insured enrollees in the United States. You can see the yellow bars are prices, and for all types of care (inpatient, outpatient, etc), it was prices that drove spending increases from 2010 to 2011. You can see it wasn't utilization, which is red. It wasn't intensity, which is blue. It was prices that were the driver of increased spending.

The CMS also does something similar. The blue bars on this graph represent the percentage of spending increases driven by medical price increases, going back to 2004. Whether you look at total national health expenditures or just personal health expenditures, you can see the blue bars dominating. So with a different data set and a different set of analysts, you come to the same conclusion: it's the prices.

As I mentioned earlier, there is concern over quality problems – the overall level of quality, variations in quality – and, of course, the implications are the consequences for the health of individuals and for the population at large. So this is also a serious issue. It's not just cost; it's quality as well.

Let me tell you a little bit about consolidation. There's been a tremendous amount of consolidation in the hospital industry. I'll talk a bit about both the insurance sector and the physician sector. We have the best data and information on the hospital industry. The data on the other sectors are nowhere near as good, but we do have some information.

From 1994 to the present, there were well over 1,000 deals. The demise of the Clinton health plan set up this flurry – not flurry, I'd say more than a flurry, a storm perhaps – of merger activity in the hospital industry. The consolidation then slowed down, but it has picked up again recently. The vast majority of hospitals in the United States are connected systems. These systems are engaged in pricing collectively, as entities in a coordinated fashion rather than as independent firms.

The Herfindahl–Hirschman Index or the HHI – that's not Hilton Head Island by the way; If you see a sticker on the back of a car and see that it says HHI, "Oh, my gosh, it must be an antitrust person." [Laughter.] So that tells you how far gone I am. Anyway, this index measures market concentration, where a higher HHI indicates a more concentrated market.

In 1987, the average level of HHI across all metropolitan statistical areas (MSAs) in the United States was at a level that indicated a market with five equally sized firms. Over 20-some odd years, the average went from about five equally sized firms to about three equally sized firms. That's a really big change. If anything, I think these numbers understate the gravity of the situation. One thing is, and we heard this earlier, MSAs are really not, for the most part, the appropriate markets; they're too big. Most markets for hospital care are substantially smaller. So if anything, the amount of concentration is greater than three equally sized firms.

Yet, HHI is just one measure. What really matters is how important hospitals or health systems are to insurers' networks. As we heard, if a system is a "must have" for an insurer network, then you don't necessarily need a gigantically concentrated market to have the system wield a large amount of market power.

Here's what we have: by 2006, three-quarters of all MSAs in the United States were classified, according to the horizontal merger guidelines cutoff, as highly concentrated. Three-quarters of MSAs. That's a big deal.

I'm going to skip over why hospitals consolidate. I think we've heard some stuff about this, except I have to say one thing that kind of gets started here. Hospital consolidation can be like a game of musical chairs. It's easy to see how this can happen, right? We have a bunch of entities in a market and some consolidations start to happen. Or there are rumors about consolidation. Then, they start worrying, like, "Oh, A and B are going to come together and then they're going to be in everybody's network. If I don't do something, I may be the one left standing when the music stops." I think there's actually a lot of that that goes on. As a consequence, some of these deals don't necessarily work out to the true advantage of the merging entities.

Again, here's a chart; this comes from the American Hospital Association. The green bars represent the number of hospitals, and you can see this huge amount here. In the late '90s, it's going down. These here actually were a small number of deals. For the most part you can see maybe the blue is a little more representative. It's ticked down, and that's been ticking up again in recent years. So even though most markets were already highly concentrated by 2006, we still see ongoing consolidation up until today.

Here's another chart. This may look complicated, but it's not. Here's what this Herfindahl-Hirschman Index was in 1990. Each dot represents an MSA, and here's where it was for that MSA in 2006. This is a 45-degree line, so if you're this dot, your HHI was the same in 2006 as it was in 1990; no change. If you're up here, it went up. All you need to see is that the majority of dots are on this side of the line. So the vast majority of MSAs in the United States became more concentrated from 1990 to 2006. There are some that became less concentrated, but that wasn't typical at all.

What about the insurance industry? As I said, we actually don't have very comprehensive data on this industry, but we do have a few things. Leemore Dafny, who is a faculty member here that David mentioned, is now at the Federal Trade Commission. Leemore has done some terrific work on the insurance industry and has great data for the large employer-sponsored segment of that market. As you can see, we compare 1998 to 2006; concentration went up quite a bit. In 1998, HHI was like a market with five equally sized firms. In 2006, HHI was between three and four. My point is that the insurance markets were pretty concentrated, and they have been growing more so, especially from 2002 on.

The U.S. Government Accountability Office did a study of the small group market and found some things that are very similar. The market share of the largest carrier in a small group market has been increasing over time. Most states had five firms controlling three-quarters of the market by 2008. So they're finding patterns in the insurance industry that are very similar to the hospital industry.

For physician services, we don't have as good of information as we do either for insurance companies or for hospitals, but there is some information available. We know that practices are getting larger. There have been a couple of attempts to measure market concentration. Sam Kleiner and Will White – this paper is actually in David's online journal, HMPI – use Medicare data to try to come up with some measures of concentration for physician practices.

There are a couple of things you can look at that I think are revealing, such as the market share of the two largest practices in the market – and this represents a median across all the different areas that they looked at. They

found for primary care the median was about 33 percent; for oncology, about 72 percent.

If they measure these Herfindahl indices, for primary care, the median is about 761. I think this would not be a level of concentration that would trigger antitrust concerns. Not too surprisingly, there are a lot of primary care physician practices. But for cardiology, you're getting substantially higher, and oncology is also substantially higher. Again, not a surprise. Does that mean that there are problems in these markets? You don't jump to the conclusion from that, but that means that you should start taking a look. Again, it wouldn't surprise anybody that markets for more specialized services are more concentrated.

There is a study that was done in California a few years ago that found a very large HHI measurement at the county level for physician practices. That's about what we have at this point in time. As some of these new data sets come on line – the Health Care Cost Institute data set that I mentioned, and there are a couple of others – I think we'll see better information on what's happening in physician markets.

Another thing that's of great interest is the consolidation of physicians and hospitals. There was a lot of integration in the mid-1990s; people may remember physician-hospital organizations (PHOs). There are a number of different arrangements. PHOs peaked and then declined steadily. Since then, the one thing that's changed is the employment of physicians. My reference point is the Kocher and Sahni article in the *New England Journal*, which apparently has inaccurate data. I think the overall direction of the trend, whether the numbers are dead on or not, is correct. There's been a large increase in the number of doctors employed by hospitals over the past ten years or so. We also have the more recent emergence of accountable care organizations (ACOs), encouraged by the Affordable Care Act, and those have been growing as well.

Here's the Kocher-Sahni article, and the blue line represents physician-owned practices; the red line represents hospital-owned. You can see that about mid-2007 they cross. Now again, whether that's accurate or not, I don't think there's a dispute that the number of practices that are now hospital-owned has been on the increase. So that is also a relevant phenomenon.

OK, so those are a bunch of facts. But so what? Prices are going up, concentration is going up. Who cares about that? Those are just some facts. Let's try and put these in some context.

As I mentioned earlier, we use a market system for providing care and financing. Unless we replace it with something different that doesn't use markets, we need markets to work as well as they possibly can. Consider one

extreme alternative: a completely unregulated monopoly. Let's assume there'd be mergers or market power. Let hospitals or insurers or whoever merge and dominate a market, and then the government does nothing whatsoever. That seems to me like a completely unacceptable approach to the problem. I'll provide some evidence that I'm not just saying that, but that it is actually problematic.

I'm going to contend that this is an issue. If markets are not working well, we pay. Prices are higher, but at least quality is lower? [Laughter.] Anybody interested in a deal like that, see me at the break. [Laughter.] Service may be poorer.

Let me make a point. I'm going to repeat this at least once if not more. When I say, "We pay," that's exactly what I mean. If prices go up, you might think it is not a big deal. Maybe hospitals charge higher prices. Well, insurance is going to pay for that, right? United Health Care or Cigna or something will just eat those losses, and they're a big, bad, nasty company. But you guys don't think that way, right? [Laughter.] I think a lot of people might think that way. So who cares?

Regardless of how you think about these firms, that's not what happens. They raise their premiums. Then you might think, OK, so what? Employers just eat that, right? General Motors, Northwestern, Carnegie Mellon – but that's not what happens either. Those costs get shifted dollar-for-dollar onto employees. Employers don't end up eating those costs. Employees pay for them through reduced total compensation. Does the employer care about this change in compensation? They don't. It doesn't matter to the employer if they are paying this much in salary, this much in health insurance, and this much in other stuff. They really care about the total package.

What about workers? I know I'm worth a lot to Carnegie Mellon, but I'm not worth an infinite amount. I'm worth more than I'm paid, by the way. [Laughter.] Aren't we all? So please tell my dean. He's never heard that before, not from any of the faculty. Never.

So I'm worth a certain amount, and let's assume I'm getting paid that. That's not true, but let's assume it is the case. Suppose the cost of my health benefits go up. Well, they're not going to pay me more because I'm not worth more, so something else has got to give. Either my pay has to go down, or the benefits are going to get cut back, and that's what happens. In some cases, particularly in small firms with low-wage employees, the employers drop coverage entirely because the costs get too high. In order to pay for health insurance, they would have to cut their wages for their workers to unacceptable levels. People would just leave. That's what happens. Individuals pay for this, not big corporations.

The Affordable Care Act retains, roughly speaking, the basic structure of health insurance. You think of private health insurance, Medicare, and Medicaid as being sort of a chassis – albeit a rather ugly chassis built of some weird parts that were put together with a weld here and some duct tape here and some super glue here. It is such a horrible car, but we keep driving it. [Laughter.] Set that off to the side.

We're maintaining that same structure, and that structure relies on markets to deliver the goods. The ACA does not change that in any fundamental way. I think that's very important. Health insurance exchanges have to work. They are markets. They are heavily supervised markets, but they are markets. Provider markets have to work.

So let's get to evidence. I've made a bunch of claims here, but now I'm going to tell you about the evidence. As I said earlier, much of that evidence has come from right here at this university. What does competition do? Does it lower prices, improve quality, and so on and so forth – what does it do to costs?

What do hospital executives think? Well, this is Toby Cosgrove, interviewed in the *Wall Street Journal*, the CEO of the Cleveland Clinic, a real leader in medicine internationally. It is one of the two health systems that dominate the Cleveland market; the other is the University Hospitals system.

The *Wall Street Journal* said, "You're consolidated; do you use that leverage in negotiating prices?" "Yes, we do." OK, that's refreshing. "We consolidate and we have higher quality, lower costs, more efficiency." "Has that translated to lower prices?" "No." [Laughter.] I think that's very revealing. The Fitch, which is a financial analysis firm, said, "Simply put, less industry consolidation means decreased pricing power for hospitals." So this is a very important market participant, somebody who should be very knowledgeable, and a financial analyst of the industry. Both have the same opinion.

There's actual hard research evidence on this. I think that the research evidence on the competition of hospital prices is very solid. The work was begun on this by David Dranove back in the 1990s, and there's been a lot of work in this area. It gives very solid evidence that mergers lead to price increases anywhere from 3.5 percent to 53 percent. These are just estimates from various research studies. The magnitude is going to depend on the availability of close substitutes, as you heard earlier. That's no big surprise, right? If a merger doesn't eliminate a close substitute, then it's not going to drive up price a lot.

For the Summit-Alta Bates merger, the bare estimates were anywhere from 28 to 44 percent prices increases. The French-Sierra Vista merger was in San Luis Obispo, which is a relatively small place ringed by mountains. The

isolation made the merger close to a monopoly, and it was estimated to drive prices up to 53 percent. I think the estimates for the Inova merger were that prices increased on the order of 30-some odd percent. It can be very substantial price increases. It doesn't have to be, but it can be. And as I said before, if those prices go up, it's a 100 percent pass-through to consumers. It's not somebody else that's eating those price increases; it's consumers.

The difference is, of course, that if there's a merger in the computer hardware industry when you go to buy a computer, you see that. The price increase comes right out of your wallet at the point of purchase. That doesn't happen here; prices are obscured and consumers don't always see what they pay. It's not so evident to people. But it comes out of peoples' wallets just the same.

What about quality? The evidence here I think comes from two different sources. In one, we look at places where prices are regulated or administered, such as the Medicare program. In the U.K., the National Health Service, at least after 2006, had an administered pricing system very similar to the Medicare system in the United States.

There are studies that pretty much unequivocally show the following: in areas where hospitals face less competitive pressure, mortality rates are higher. For heart attack patients, for patients getting heart bypass surgery, the average overall mortality rates, adjusting for the illness that buried the patients after [inaudible]. I think there's very strong evidence on this. I'm not suggesting that this is deliberate. It's more that if there's not as much comparative pressure, things can slip. Organizations don't necessarily run as well as they otherwise would. They don't have to keep as taut a ship. If you have some very sick people, those people are very vulnerable. Even small changes in how well things are done can have big consequences for very sick people. I think that's what we're seeing here. We're seeing that in multiple studies in multiple countries.

When prices are market determined, the results are less clear. But this is a statement only an economist would say. This actually makes me feel good because it's consistent with economic theory. Economic theory shows us that the effect of competition can go in either direction when prices are market determined, and that's exactly what some of the empirical results show. I'm being a little facetious, but my read of the evidence here is that the bulk of the evidence says that even where prices are market determined, quality is better in more competitive markets. In addition, the effects appear to be long lasting. Evidence is almost entirely using mortality as a measure of quality because that's easy to measure. We can see when people die, and I think we can all agree mortality, on average, is a bad thing. We prefer lower mortality rates at hospitals rather than higher mortality rates. Certainly there's not complete evidence, but I think there's a lot of evidence.

Do not-for-profit hospitals behave differently? This is something that I think Josh mentioned, and maybe David and Joe as well. Not-for-profit status is a very important factor in some of the antitrust suits in this industry. I think about 60 percent of all hospitals in the U.S. are not-for-profit. If you measure it in terms of volume, like patient days or revenues, it's more than 60 percent; it might be 70-some odd percent. Certainly all academic medical centers are not-for-profit.

So you might say, "Well, they *are* not-for-profit; they're community-oriented. They wouldn't do anything naughty after the merger like raise their prices, would they?" As we talked about before, yeah, they would actually. It doesn't make dime's worth of difference whether they're for-profit, not-for-profit, or public. Even systems like the NHS quasi-public hospitals in the U.K. respond to competitive pressures. We see this in the Netherlands as well.

If you think back to when hospitals were charitable organizations, back in the 1960s and even the 1970s, a large chunk of revenues came from donations and endowments. Today that percentage is tiny. Not-for-profit hospitals are revenue-driven organizations. When organizations are sales revenue-driven, profit status doesn't really matter.

What about costs? There are efficiencies possible due to merger. David Dranove has produced, I think, the best evidence on this. When a merger results in true integration there can be substantial cost savings. However, most mergers don't lead to true integration. At the end of the day, from an antitrust perspective, if those cost savings don't get passed on to consumers in the form of lower prices, it doesn't really matter. As I said earlier, the evidence is that mergers tend to lead to price increases. So even if they reduce costs, all those savings are just going to higher profits that go into the pockets of the hospital to be used in one way or another, but they certainly don't get passed on to consumers. This doesn't mean that it couldn't happen, but the research evidence indicates it's not what tends to happen.

What about physicians and insurers? There is less evidence here. There's a recent paper that uses new data and shows that physician prices are somewhat higher in more concentrated markets. Not hugely so, but somewhat. There's older evidence along those lines as well. Leemore Dafny, who, again, is a Kellogg person, has shown that insurance premiums are higher in more concentrated markets, and that in the larger employer-sponsored segment of the insurance market they can be substantially higher as well. There's some other research that shows evidence of very substantial market power in the Medigap market, and also in Medicare+Choice, the predecessor to Medicare Advantage. We know there are a lot of research studies out now that show that plan choice is quite sticky.

With regard to physician-hospital organizations, there's not a lot of evidence of effects on price. There are just two studies I know of, and one shows no effect and one shows some effect. The evidence, I think, doesn't show much benefit from physician-hospital organizations, no real improvements in efficiency or quality. There is some evidence that insurers in concentrated markets pay lower prices to providers, but they get higher premiums. So the notion that countervailing power will ultimately benefit consumers doesn't seem to be borne out by what we know from research evidence.

With ACOs, the question is whether ACO should stand for "anti-competitive organization." There's been a lot of concern in the antitrust community – not mirrored for the most part along the banks of the Potomac – that these entities could be shams, designed to simply enhance negotiating power, and that they could drive up prices. Obviously we don't know as of yet. We'll have to wait to see until we have more of a track record on these things. If the past is useful at all, remember that PHOs did not produce real efficiency or quality gains. It doesn't mean ACOs can't. There's a different acronym, so if there's a different acronym, then this time must be different. But maybe, indeed, ACOs will be more successful than were PHOs. We don't know what they'll do to prices, so it remains to be seen.

Next, on to organizational innovation. I don't know of hard evidence on this, but anecdotally there are stories of a trend of less innovation or new forms of organization in monopolized markets. A big question is whether the organizational inefficiencies we see in the U.S. health care system are due to markets not working and the inability of markets to deliver efficient organization. Or perhaps it's just the opposite: markets could do that, but there are barriers at the present point in time to prevent them from delivering. It's a question that's very hard to answer with evidence, but I think ACOs are an example of an approach based on the former presumption that markets aren't going to deliver so we need the government to push the issue. I'm not saying it is right or wrong, but that's an example of that view of things. But it is a big issue.

So let me talk about what we can do about it, and I'll try to wrap up, and I'll leave time for questions before lunch. I don't want to stand in the way of people and food. That would be a very bad idea.

So as far as overall goals, I think we all want the same thing. We want efficiency; we want responsiveness; we want innovation; we want lower prices, higher quality, and better service. That is completely uncontroversial. One thing to point out is that things can work better, but it's not realistic to expect health care markets to work like markets for things like computers or groceries. It doesn't mean that they can't improve and we can't have, in my view, reasonably well-functioning health care markets. Still, there are some pundits out there who say, "Well, if we only do A, or if we only do B, these

markets will be working just like markets for pens or books" – like we'll be able to buy health care on Amazon, that kind of thing. I understand the points they're trying to make, but I don't think that it's realistic to think we'd actually get to that point.

Roughly speaking, the regulatory policy options are things like price controls or global budgets. There are also less regulatory, more market-oriented options. I want to make an important point here, which is that whichever way we go – more or less regulatory – there is going to be regulation and an important role for government. Even if we go more regulatory, there's an important role for markets. Unless we go toward a complete transformation of the health care system, which frankly I don't see happening any time in any of our lifetimes, there's a role for both markets and governments, whether it's more regulation-based or more market-based.

Let me say something quickly about price controls. The rationale for price controls is that prices are too high due to market power, and we can't really do anything about the concentration. We let this happen. We were asleep at the wheel. The courts made bad decisions in the 1990s, and we're kind of stuck with this. We really can't expect markets to deliver because things just got out of hand. Now we have this situation where we have too much market power and we should regulate prices. Another rationale would be health care markets just don't work well enough and can't work well enough to deliver, and so we have to rely on regulation.

Now, if we do have monopoly and there's nothing we can easily do about it, then certainly regulation can be an efficient approach to that problem. If we don't think that these markets work well in terms of price signals and moving consumers around in the right way, then again, regulation might be an appropriate response. Of course, like anything else, there are some caveats. Regulators can be captured by the industry they regulate. This is a fairly common phenomenon. It's not so easy to set rates. But it can be done. Medicare manages to do that by reducing the number of rates they had to set for diagnoses or procedures to DRGs, but there are still a large number of DRGs. So setting rates is a very imposing task.

Getting those things right, or even close to right, is not easy. If a price is set too high, you can get excessive provision of services. If it's set too low, you can get too little. Think of the Medicaid program: the prices are too low, and quality can suffer. Under a regulated price system, we don't tend to get a lot of innovation. At the end of the day, the evidence I just showed you a couple of minutes ago says competition still matters. Look at Medicare. Look at the English NHS. Even when we are regulating prices, competition matters. Arguably, competition is something that we should care about a lot more than whether the price is high or low. Competition can alter the probability

of death if you go to a particular hospital. That's a huge deal. So markets still play a role, even in a system like this.

Let me tell you about a little evidence. All payer rate regulations were popular in a number of states in the 1970s and 1980s, and now they only exist in Maryland. There was a lot of research on this, very little of it good, but one of the best pieces of evidence, in my view, was produced by David Dranove a number of years ago. David showed that regulation can actually slow the rate of growth of health care costs by a non-trivial amount: a little over 1 percent. That may not sound like a lot, but when you think about a 1 percent slow down in the rate of spending growth, that's a pretty big deal. That only happens in places where the regulation is effective. But the real kicker is that they're not effective in a lot of places.

Let's ask the following question: So there's evidence that all payer rate regulation, at least when it was done right or reasonably well, did slow the cost growth rate. Can it do better than markets? Well, if you look at what managed care did in the 1990s, there is evidence, found by David again, that showed that in California, managed care pushed down hospital markups by substantial amounts. There's also evidence in Massachusetts that shows substantial reduction in spending due to managed care during this time period. These are large reductions; they're much larger than the estimated effects of all payer rate regulations.

We can also make a few comparisons. You can see that this is the high level, and I don't regard this as scientific evidence. We can say, "OK, let's look at rates of growth for Medicare spending and private spending." But it's not really apples to apples; there are all kinds of problems with this. If price controls in Medicare are doing such a great job, maybe we'd see dramatically lower growth rates for Medicare than for the private sector.

We can also make international comparisons. Here are the growth rates of spending for countries that use price controls and countries that don't. We can look at the Netherlands, which went from a regulated to an unregulated price environment. Here, if you look at – the red represents growth rate for public, blue represents private – you can see sometimes public is higher and private is lower; sometimes it's the opposite; sometimes they're pretty similar. It's not obvious to me there's a slam-dunk either way. That doesn't mean, of course, that price controls wouldn't or couldn't work, but it's not a slam-dunk.

Internationally, these are OECD data Organization of Economic Cooperation and Development. Some countries that use rate setting, like Australia, France, Israel, and Italy, have lower growth rates. Here's the U.S.; right here is Israel. Some have higher growth rates: Finland, the United Kingdom, etc. The U.S. is actually below the average for the OECD. Rate setting is much more common

in the OECD than anything else. Like I said, some of the rate-setting countries are above. It doesn't appear to be a slam-dunk. It's not obvious just from eyeballing this.

In the Netherlands, they deregulated prices substantially, starting in 2006–2007. Segment A is the regulated price; Segment B, the blue, is the unregulated price. You'll see them diverging. Again it's not a piece of hard scientific evidence, but you don't see a slam dunk for the regulated price sector either.

Price controls might be useful, but I'd say that we don't see simple *prima facie* slam-dunk evidence in their favor. It doesn't mean that they couldn't work, but that we don't see that kind of slam dunk.

There are a number of countries that use global budgets. Yes, their health care spending levels are lower, but rates of growth are similar. Global budgets tend to have issues. They're hard to enforce. There's incentive to spend up and over, at least a little over the budget, to ratchet those up. Again, like the price controls, there are issues with quality and innovation.

Let me talk about a market-based approach. The goal here is to set up rules of the road and enforce them with support and an environment that supports competition. What you need are the right basic conditions, and you do need ongoing oversight. I think you need vigorous antitrust enforcement. Now again, as you've heard earlier, antitrust can do some things; it can't do everything. Particularly where there are consummated mergers, it's very hard to go back and address those. Nonetheless, there's quite a bit that can be done. In my mind, the most important point is to try to facilitate entry, to make it possible for new forms to emerge for there to be vigorous competition. Let the existing entities be what they are – but if their market share is not secure, if there's a threat of entry from new forms, then we can foster effective competition.

There have been positive developments in new types of delivery mechanisms entering the market, such as retail clinics like CVS, Walgreens, Walmart, etc. Practice regulations are being relaxed in some states with nurse practitioners, and technological advances like robotic surgery, digital radiology, and telemedicine make it possible for patients to be treated by practitioners at a distance, rather than folks who are close by.

The big question is, "Are all these things the tip of the iceberg that will continue to grow and actually transform the market? Or are these a small number of ice cubes in your drink that are going to melt in the space of a relatively short period of time?" I don't know the answer to that. At least it's suggestive that there's a possibility for new organizational forms and new

modes of delivery to emerge, and that's one mechanism by which competition can be injected into these markets.

Quickly, on the demand side, tax policy should be changed to promote the exclusion of employer-sponsored health insurance. This is a pet theme of economists. We've heard about some of these other things, about selective contracts, tiering, narrow networks, transparency, etc. I think that while transparency and caution in consumers are great, they're not going to drive the market. In all, 80 percent of spending is driven by 20 percent of people, 50 percent by 5 percent. You can't, or you shouldn't, have a plan with high enough cost sharing that will affect these people. They're going to blow through any deductible you could possibly have that would provide them with reasonable insurance. So it's not an argument against cost sharing or transparency, but you can't expect those things to drive the entire market. Big buyers still play a very important role, in spite of the fact that some advocates contend transparency will solve everything. The other often-promoted idea is we'll solve everything with cost sharing. I don't think there's a lot of research basis for those arguments. I'm not making an argument against doing that, but they're not going to solve the problem.

The Cadillac tax in the ACA is a way of eventually taxing the majority of employer-provided health insurance because it's indexed to overall inflation, not to rates of growth of health spending. In the California Health Exchange, we saw insurers using narrow networks; they were excluding high-cost providers. That's also a positive development. High-deductible health plans have been growing. This transparency movement, I think, is a positive development. I don't think it's the silver bullet.

Conclusion – I'm sorry, I've run over – we've allowed, over time, health care markets in the U.S. to become concentrated, and many of them are uncompetitive. That has consequences of higher prices, lower quality, and all kinds of other bad stuff, and it harms us. It's not somebody else's problem. It's our problem, but we can do something about it. I think the great debate's going to be between more regulatory- or market-based approaches. Where it will go is hard to say. I don't expect any gigantic changes, but I think we'll see some movement, and it's a question of emphasis. I personally, as you probably infer, favor a more market-oriented approach, but I think more regulatory emphasis also has some real value to it as well.