>> So this next section, we're talking about geographic variation in Medicare spending. So why are we concerned about geographic variation in Medicare spending? We want to know, does, if we spend more money, are we--what's the bang for the buck? Are--do we realize better outcomes or not? You send, you know, a patient off to see these docs, this set of docs, in the end, are they surviving? Is their quality of life better? Have you addressed, you know, whatever health concerns they had, taken care of them, alleviated them? Or, you know, you pick your favorite quality of life index and go after this. So we see this variation in Medicare spending and how do we justify it. If we don't see better outcomes, you know, it doesn't quite pass the sniff test, right? Something doesn't quite smell right about this. OK, so why are there higher costs associated with--or that we see in certain areas of the country, and Florida is pretty suspect? OK, so our goal here is to review how Medicare adjusts the reimbursement levels and I think you already know that. We've talked about it, geographic region, teaching affiliations, et cetera. And then describe the importance of readjusting cost--the cost estimate so that the high costs represent differences in intensity of services versus how Medicare reimburses providers. And we also don't want to just, you know, find out, "Oh, well, they're really sick." We want to be able to take that into account too, right? OK, so that's our goal here. Again, the Medicare price adjustments. So Medicare reimburses based on DRGs. And after the break, we'll talk about a set of examples where we look at DRGs and try to figure out whether the cost associated with these DRGs actually takes into account differences that we're interested in. So just keep that in mind, setting the stage for our next--the next talk. But, so for example, in 2007, and I think you already saw this in your data sets, but a stent for major cardiovascular event, that weight was 2.7, bypass surgery is 6.1, so it's a poster, you know, representing amount of resources necessary to provide this service. OK, so the Dartmouth group, how many of you have heard of Dartmouth? You're all pretty much health--HSR kind of folks, so in some ways, I feel like I'm preaching to the choir, so--but I hope you can take something away from today's set of presentations. But they have found that actual payments vary considerably across what they refer to as the health referral regions. And they look at, you know, where are patients going, who's referring them to where, and then they have identified what we refer to now as health referral regions and look at payments per DRGs and how those vary across those HRRs. OK, so we talked about it in addition to those base DRG rates, Medicare adjusts the reimbursement levels by cost of living, New York versus North Dakota, there's my example, adjusted by the wage index and you can get those wage indices from the BLS, Bureau of Labor Statistics. They send higher payments to hospitals with residency training program, so medical education, IME. The disproportionate share hospital payments go to hospitals who are serving a high percentage of low-income patients. So health services performed in urban areas, New York for example, typically have higher reimbursement rates than in rural areas given this set of adjustments that Medicare takes on. So when you're comparing cost of doing business across different regions, you want a standardized price. You don't want to just go with what you're going to see in terms of reimbursement rates. And all of you, you guys are going, "Oh, no." I'm going to qualify it though. Suppose that your study stays or is maintained within a certain geographic region that's small enough

and all their patients are seen at the university hospital. Now, you're kind of OK 'cause you--guess what? The reimbursement rates are set. It's one hospital, it's one geographic region, and you don't have to take everything out if you don't want to because you kind of have a standardized set. But if your patients are seen across the US or your--the goal of your study such as the one that I just characterized spans across the US, now, you have to do something. Because you don't want to just flag New York patients, right? You're really--you're trying to characterize differences in practice patterns across the US. So you don't want the high prices to simply reflect differences in reimbursement rates, you want to identify high spending areas typically characterized by over-utilization for example. And if you don't acknowledge those differences, you're going to end up identifying high-cost hospitals that, really, the higher cost can be attributed to the fact that they're teaching hospitals or that they are receiving the DSH payments. So our goal is to standardize these prices. And how do you do it? Well, I just took an example from Dartmouth where they strove to normalize the prices and their goal was to roll everything back up so that it reflects what Medicare spent on health services in any given year. So for inpatient care for example, you take the DRG price--you start with the DRG weights and the prices and then you see--let's see if I can get my little, oops, the DRG weights and the prices and then you see the CMS price adjustments, all those--the DSH and the medical education, those price adjustments. And then you see how much did Medicare spend on inpatient care. And then you try to back this out and you come up with this normalizing factor that really reflects, OK, across the US, how big were these price adjustments on average? So you have the actual inpatient expenditures that Medicare spent on inpatient care for the US, you know what the DRG weights and DRG prices are for that year, and you divide those two and then you come up with what they call this normalizing factor. And that's how you establish, you're just basically adjusting the DRG weights and the prices upward to reflect Medicare dollars. The--so that's one way of doing it. Then for outpatient services, what the Dartmouth group is suggesting that we do, so you have age, gender, and race adjusted RVUs, they added up--they added those up across patients and across the health referral regions. And then they came up with this uniform price for a single relative value unit, the RVU, for every HRR in the country. So it's kind of the same kind of thing except it's complicated because as Barb pointed out, you have all these other adjustments going on, you have the geographic practice cost indices going on, you have the fee schedules conversion factor. And once you--and there's different types, there's the work RVU, there's the practice expenses, the professional liability. And so once you multiply these things together and add them up, then you can see what the rolled up Medicare outpatient physician services are and then you basically back things out in the same way that we did for the inpatient stuff. So it looks a little complicated, right? So it very much depends on your study. If you're lucky enough to be, you know, you're in--all your patients are at one hospital or whatever your mission in life is, if it's across the US, you really need to take into consideration that you don't want to flag high-cost patients just based on adjustments that Medicare has done.

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[ Inaudible Remark ]

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Yes, the references are at the end of my little [inaudible] here. OK, so here are two researchers. I can't say I'm going to guess, Reschovsky [assumed spelling] and [inaudible]. So, anyways, they have--these researchers have conducted some studies where they'd looked at geographic variation and they have attributed a substantial part of this variation in cost to health centers. So the other thing you need to do is take into consideration case mix. They looked at Medicare beneficiaries who moved from lower to higher spending regions and they found--so this is a qualification, another sort of red flag for us researchers, is that there are some other stuff going on here. They looked at Medicare beneficiaries who moved from lower to higher spending regions and found that they have more diagnoses coded after they're moved. But moving the opposite direction, they didn't so they go from higher to lower, they didn't. So what does that mean? It means that they're running more tests and they're coming up with additional diagnoses and when you do the risk adjustment, guess what? They're going to look like pretty sick patients, right? And so there's a kind of a catch-22 with this thing, is that the higher intensity folks--you know, regions are running more tests, and us, researchers, are thinking, oh, it's because they're sicker because now we have more diagnoses for these patients, and so there's just a bit of a heads up from other economies who have done this type of work that are saying, uh-oh, you know, we're back in out case mix but yet, they're saying that some of that variation explained by the diagnoses results from these different--differing coding practices. And that may just reflect differences in the aggressiveness of diagnostic testing. So the catch-22 is this bottom line here that maybe that aggressiveness of care, the additional codes, that you see in the data sets maybe a cause of variation in health status rather than an effect. So what can we do about it? Well, I'm not sure we can do a whole lot about that other than just to recognize it and to be aware that that's a limitation of us, you know, doing the case mix adjustment, is that we can't really tease that out. I mean, how do you know whether the patient is sicker or they just ran a bunch of tests and, you know, be careful what you look for 'cause you might find it, right? I don't know. Is it better care? You know, the jury is still out on that. OK, so that's what work, you know, with the ACA reform, we're really trying figure out, all right. So what's the bang for the buck? We're spending a lot of money on our patients, and Medicare--Medicare's budget is tight, right? How do the US health care cost compare to other countries?
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[ Inaudible Remarks ]
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Much higher, exactly. So in some ways, you know, you're feeling a little bit bad, you know, that, OK, our--OK, let me back up. When I worked at Park Nicollet, what group of patients, right, have the lowest reimbursement rates relative to others? So--excuse me?
>> Primary care.
>> Primary care. Well, I was thinking in terms of insurance. What types of patients with what types of insurance coverage?
>> Medicaid.
>> Medicaid and?
>> Medicare.

>> Medicare, right? Because in general, providers are saying, "I want to take these patients because I can't make ends meet, the reimbursement rates are too low," right? That's what they're saying. But if you look at our reimbursement rates, compare them to other countries, they're actually really high. And some patients, you'll see it in the New York Times where some patients are like taking their, you know, medical tourism is what they call it. They're just going somewhere else and having procedures done because, in other country, because it's cheaper for them than, you know, than to actually have it done here in the US. That's interesting, isn't it? So anyway, OK, so the Institute of Medicine has been called upon to conduct a study where they're looking at--they're trying to figure out whether Medicare should modify payments to adjust for what they call the value or the quality of services delivered in the region by using what they're calling a value index. How many of you have heard about this? OK. So what they want to do is account for health benefits and costs. They want to raise the payments rates in the areas where benefits are high relative to Medicare spending and lower the payments where benefits are low relative to spending. And the idea is that, "Hey, we want to channel Medicare dollars to areas that are high-quality services are at really cheaply low costs." So in other words, the really cost-efficient providers are to be paid, you know, or paid more than the inefficient providers but this is really controversial. This panel concluded it would be unfair. Why? Because you're going after regions and within regions, there's so much variation in practice patterns for one. But what you would essentially be doing is rewarding inefficient providers in low-cost areas, so in other words, you're increasing reimbursement for all those providers in the low-cost areas and that would unfairly reward poorly performing providers. And then you'd punish more efficient providers in the high-cost areas. Why? Because you're basically saying, "Hey, you guys cost too much, we're going to reduce reimbursement rates and punish everybody in the region even the high-performing providers." So the jury is still out. The panel did find that there's a lot of variation across health referral regions mostly because of post-acute care so I'm not surprised to hear people focusing on post-acute care in this room. And the magnitude, again, I'm going to pick on Florida for post-acute care. It's suggestive of fraud, so that really weakens the case for developing a value index if really what we see is indicative of fraud. We're seeing a lot of variation in admissions and visits among hospital service areas which are a subunit of the HRRs. We see that spending for one condition within a health referral region is not strongly correlated with spending for another. So physician specialties within HRRs are not equally aggressive. There's lots of intra HRR variation among the providers. So maybe what we ought to do with our health care reform efforts is target clinical decision making units rather than geographic areas. So when we talk about value based purchasing or accountable care organizations, that's a step in that direction. We see--what's the evidence in terms of high spending, does it really result in better outcomes? It's mixed. Some studies show positive correlation, some negative. I think it depends really on the disease and whatever the country you're in. But it's really hard to tease out which direction we should go with reimbursement levels. And depending on what the conditions are, whether we really know, whether higher spending in certain conditions is worth the effort or not, we really don't have enough evidence to make

that--those calls. So the commentaries, here's the link to the New York Times. Here's my set of references for those of you who would like to, you know, if you need something to fall asleep to at night. There's--I think we already saw this link to the Medicare payment systems and here's the Dartmouth atlas link.