>> So I'll review the different methods of costing, review some journal articles and findings that have used these methods. And then we'll take a look at costing from an e-cohort example that I had worked on. And I had mentioned it in the previous segment looking at an e-cohort. And then looking at inpatient and MedPAR and looking at the different ways to cost and how the numbers vary. So as Barb had asked earlier and as I, we get a lot of questions about what is your definition of cost. So someone will say, "I want to calculate the cost of this care." And then the first question I pose back is, "What is your definitely of cost? Cost to whom? Is it the cost to the hospital or facility? Is it the cost to Medicare? Is it cost to the beneficiary?" So options for estimating hospital costs. We've talked about all of these. Cost to charge ratios. Allowed charge amount. Payment amounts. You could get it from the internal hospital cost accounting system. And, you know, a caveat I think that you've probably gotten through the last two days is never, ever use charge amounts alone. And if you ever read an article that only used charge amounts, then you have to be suspect if they were using that to estimate cost. And I have seen that. So it may seem silly, but I'm not trying to be silly. Calculating costs for other facilities just, you could look at how do they report in the cost reports? Cost per day. You could look at total cost for all patients. Or you could look at Medicare costs if you were looking at wanting to calculate what does it cost the facility. Or are you looking at Medicare's costs? You could look at the payment amounts, the allowed charge amounts. You could use the Medicare cost to charge ratio applied to charges. Or are you trying to include beneficiaries cost in this whole mix? So we do have copayments and deductibles, but it doesn't include, we don't have any other way to calculate the costs incurred to say transportation or caregiver or any of those things using cost reports or claims. All right. So let's take a look at some of, there have been some articles that have looked at different methods of costing and see what they have to say about which method is the closest to the provider's actual costs. So in all of these articles that we will examine, the gold standard would be the cost to the facility. And in this case it would be cost to the hospital. So that's what they're benchmarking it against. We have four different articles that we'll look at. I did do a search to try to find newer articles, and I could not find any more current articles that were comparing methods. So I'm using four that I have used in the past. So the first article, the Schwartz article, this is the one that everybody uses. And they use it as the basis for, reviewers will often use it as a basis for commenting on articles to say that, "Oh, well, if you're going to calculate cost you have to do it at the cost center level because that's what Schwartz had said was the best method to calculate cost. So the article, which was done in 1995, and it was a case study. It was one and of one. He looked at the actual hospital cost using the cost center level and then compared it, looked at the overall hospital, and then looked at what it was compared to the providers actual costs according to their cost accounting system. And so Schwartz had said that the cost center level was the best approach. And so now for ever more that is the best approach according to anyone that is reviewing articles that they'll say that you have to use a cost center level approach. And I get that on the help desk all the time. People calling and saying my article was reviewed. I need to do a cost measure, and they said I should use a cost center level. And then I sigh, and I'm like, "Oh, are you sure you

have to do that." But so that was what Schwartz had said. There's another article, Burkhart [assumed spelling], had looked at Medicare payment and total charges, and in both cases they overestimated the cost when they compared it to the providers actual cost. Then Haymond [phonetic] article compared to cost center level to the Medicare payment. And in that case Medicare payment came closest to the provider's actual cost. And then Tiara [phonetic] looked at cost center level, overall hospital, and total charges. And in that article, the cost center level came the closest. But I hope that from looking at this and seeing the different measures used, I mean, the moral of this story is that there is not one method that everybody can agree on. That is the closest to the provider's actual cost. And so it's kind of all over the place as far as what method may be best. So when I'm visiting with researchers and as I'm telling you, I would say it depends on what it is that you're trying to study, how much effort you want to put into it. And, you know, so you'll have to make your own determination about which method is closest. But you have options. And you can, if you're looking at claims you can pull it out. Pull out the payment amounts, the allowed charges, use an overall hospital cost to charge ratio applying the charges. See what you come up with. So the literature summary, as I mentioned, no one came to one conclusion about the best way to approach costing. So these are just more considerations, costing service for one hospital or across the continuum. That's another area where if you're looking at services across the continuum, can you even imagine trying to work with the hospital cost reports? SNF cost reports? Home health agency cost reports? To pull out costing information or trying to apply things to charges? I mean, to me that would just be madness. And so, you know, maybe you'd like to consider the payment amount as a proxy for cost. So that's your definition because you can easily find that in a claim's data. That's something that is right there. Looking at an example just so you can get some sense of what the different, what are the numbers associated with these different costs. This is a neat cohort that was pulled for 2002 from a MedPAR file and inpatient file. And then pulled out the following cost variables. So total charges, covered or allowed charges, the payment amount, and then a calculated cost using cost center level cost to charge ratios. So here's what it looks like. So the total charges, $23,000. And that was the same; it didn't matter what file. The covered charges were the same. The total payments were $8,750 or so. And then using the revenue center cost to charge ratio approach it was $17,000 for the MedPAR. And in the inpatient it was $14,400. So depending on the file that you use and the method, if you're costing at that cost center level it will differ. So this is just to give you a sense as to how the numbers differ when you, depending on what variable you're using and what file. Again, it'll, as you saw, it depends on the file and can depend, it will vary depending on the variables that you use. And, again, my suggestion would be to consider the time that you'll need to invest and the outcome that you will gain by using cost reports or any method for that matter.