>> So, I'm going to be talking today about the CMS payment systems and some other resources that are available for those of you that are interested in costing services. Anytime someone calls the ResDAC help desk and says, "How do I look at cost?" Our first question to you is what is your definition of cost, as Yvonne [assumed spelling] just kind of went over, there's a lot of definitions and getting at cost of care is a little nebulous when it comes to actually working with the claims data. But I am going to be talking about how CMS creates their payment systems for the different types of institutions and what they have. They're pretty standardized for the most part now. They're all perspective payment systems for the most part but that's what I will be going over. And for those of you that don't have data but want to either use cost reports or use some other resources to maybe look at cost of care particularly in institutions, I'll be going over some resources for that as well. So, my being from an academic institution we always have our educational objectives. The ones that I hope to talk about today is just a historical review of CMS payment systems. Most people in this room may be more interested in looking at current times but if you're looking at trendings of cost of certain procedures and things like that, it's always important to know how things were paid in the past to make sure that you're maybe looking at comparisons, apples to apples or if you see a trend that jumps suddenly, maybe there was a difference in the payment system that would make a difference because of that. I'm also going to talk about calculating acute hospital MS-DRG payments and then lastly provide you some resources for determining some cost of service in Medicare's systems. So, most people the focus has been looking on inpatient services and for those of you that actually work with either the MedPAR or the inpatient standard analytical file, you'll find a variety types of inpatient services. You'll have your acute stay hospitals again depending on what you're looking at. It's always interested--interesting to note that there are still exceptions even with acute care hospitals, Maryland hospitals or PPS exempt. You have critical access hospitals. They too are PPS exempt. You have the inpatient rehab, you have long-term care hospitals, you have psych hospitals, you have cancer hospitals that are PPS exempt. So, depending on what it is that you're looking at, you really need to know the payment system that you're looking at to understand how things were cost out or developed for payment. And again, you'll want to probably separate any kind of MedPAR or inpatient file that you have by these types of inpatient services because you certainly don't want to necessarily be looking at costing services for an acute stay hospital versus a long-term care hospital. So, it's always important to know what types of providers you're looking at. Now, for those researchers that just are interested in looking at total cost of care for a beneficiary, you may not care that there is all these different types of hospitals in inpatient file and you may just want to say what was the total cost of care for these beneficiaries when we have to worry about it. But for those that are really developing payment system cost analysis by certain providers, be sure that you're trying to at least compare apples to apples. So, I'm going to start with the acute stay hospitals. Again, they were the ones that started out that were based on just incurred cost from 1966 to '83. Acute stay hospitals were the first hospitals that Medicare began using perspective payment system. And I know that none of you can get data back to 1984 but it's always good to know that CMS has been concerned with controlling cost

throughout time that that was one of the first things that they did for acute stay hospitals was implement the PPS system in 1984. When it first started out, the system was the DRG, the Diagnosis Related Group. However, that system changed to what's now called the MS-DRG Medicare severity. DRG, you'll still see the hangover in all the files that still refer to everything as DRG. But it is important to know that if you're going to be trending cost of DRGs that when they switched over, keep in mind that the files that you get are usually calendar year files. However, CMS is on a fiscal year that begins October 1st. So, you'll see payment in changes within a calendar year file. Why I point out the MS-DRGs is because it is a completely different coating system. A DRG of 310 in the DRG method might be a 570 in the MS-DRG. So, it is a completely different coating system. So, be aware of particularly in the 2007 file. You get a change of coating systems in that last quarter of the data set. And just to let you know that the difference between the DRGs and the MS-DRGs is really looking at utilization as well of just diagnosis severity. Critical access hospitals, these types of hospitals are still reimbursed basically on a reasonable cost basis. So, for those of you that are interested in critical access hospitals, I would recommend definitely considering using the cost reports as well since they are used in developing what Medicare will reimburse critical access hospitals. Typically, they are paid at a 101 percent of their reasonable cost based in their cost reports. Critical access to hospitals are also reimbursed a little different for inpatient, outpatient lab therapy services post acute care that happens to be in swing beds. So again, if you're looking at what all went into a hospitalization, you have to think about how does that provide our bill because an acute hospital will have some services that get rolled up into an inpatient stay and be found on that inpatient stay record, has for critical access hospitals so you might have to go to more than one file to find the things that might already be rolled up into an inpatient stay. Postop--excuse me, preop are things for prior three days are rolled up into an inpatient. Emergency care is rolled up into a normal acute inpatient. All of those things would be found in an outpatient file for critical access hospitals because they do build a little bit differently. So again, if you're looking at total cost of care of episodes, different things, be sure that you understand how that particular provider bills and where you may have to go to find total cost of episodes or total cost of an inpatient hospitalization. For critical access hospitals, you might actually have to go to the outpatient file as well. However, even though they are not paid on a DRG basis, they are still calculated so you can still look at DRGs for critical access hospitals. Just know that the patient is not actually calculated using the methodology for the MS-DRGs that I will be talking about. So, inpatient rehab, they switched over to a PPS exempt. They were prior to January 1st, 2002, they were PPS exempt. Again, beginning January 1st, we're paid under the IPPS. So, when they develop a payment for that classification system, they use something called the Case Mix Group. When they look at inpatient rehab, they don't adjust payments for inpatient rehab hospitals for any kind of disproportionate share or any kind of medical education, indirect medical education. So, it's a little bit different. They do get reimbursed differently. For long-term care hospitals, again, in 2002 they started with the CMS fiscal year October 1st. They began being paid under long-term care PPS. It's

very, very similar to the acute care hospital PPS. They do use the same calculations. Often times if you look at the federal register, they'll have acute care and the long-term care kind of in the same section because they are paid on very similar ways. However, the long-term care does not provide for adjustments for DSH or IME. Again, I'll go over what formula that does go into a PPS DRG payment. But they do use the same classification system but the long-term care weights are different because they want to account for the variation and cost per discharge reflecting the different resource utilization for each of those diagnosis. So, even though that's very similar, there are some minor differences looking at acute hospitals and long-term care hospitals. Outpatient services, again, these two were originally paid on the allowed incurred cost. However, because of cost we're getting out of control. CMS did go to a PPS or a Perspective Payment System on August 1st, 2000. And because of that, you'll find different information in the files. Currently right now, you can only go back to 1999 for any data sets but prior to 2000, they use the ICD-9 procedure codes to look at payment.
^M00:10:04 Once PPS was implemented, they went to APCs or Ambulatory Payment Classification that uses HCPCS to develop what that APC is. Some HCPCS will not have a payment on it because it gets bundled or a composite APC so you do have some HCPCS that get reported but they're bundled into a separate--an individual APC. There are all kinds of services though that are in the outpatient file. So, depending on what it is you're looking at, if you're actually looking at systems of how things get paid, you have all kinds of things that are not paid on OPPS with the Outpatient Payment Systems. A lab claims different things like that, critical access hospitals that have care in there. So, you have a lot of different types of claims in an outpatient that are not getting paid on the same kind of system. So again, be aware what it is that you're looking for, well I have to pull things out separately within these files. For those of you that again are just looking at cost of particular services and you don't care how the system was developed to pay them the same information as in there for all of them. Skilled nursing facilities, I heard several of you are interested in looking at post acute care. Again, most often, historically the SNFs were paid on basis of their cost. However, they too were one of the earlier institutions that got switched over to a PPS system. That actually started July 1st, 1998, the payment classification for systems for skilled nursing facilities is something called a RUG, a Resource Utilization Group. We're now up to RUG-4's so it started out 1. We're now at the version 4 that are there. Home health agencies for those that are interested in looking at home health agencies, again, they switched to PPS, October 1st, 2000 and fiscal year 2001. Their payment classification system is a case mix system. It's based on something called the HHRG, the Home Health Resource Group and HIPPS code is actually generated that corresponds to an HHRG, and you can find these in the data files and I'll talk about that in just a second. Positions, positions again are now also paid on PPS. So, there's very few things in the Medicare claims data that really are not paid on a PPS basis anymore. Their fee schedule was implemented in 1992 when you look at services that are build by physicians or individual providers. They use a HCPC. Each HCPC has a relative value unit. These RVUs are try to measure three types of resources that these providers have. A physician work, their practice expenses and

then professional liability insurance, their malpractice insurance. So, if you ever wanted to actually kind of look at the formula for how physicians are paid, for the 2012 there is the non-facility pricing. These are physicians that don't own other facility. They are just working at a location but not responsible for facility cost. And they have their work RVU. It gets multiplied their work for their geographic practice cost index. And then again, anytime CMS is kind of changing the payment system which they often do a number of times, they have something called transitions or you always have to be aware from year to year what was the payment system, did they introduce something new. 2012, they were still looking at an RVU for the non-facility practice expense that they transitioned over four years, fiscal year 2013. It will now be a full price that they'll be paying times the PE, the practice expense, GP, CI. You add that to the malpractice, RVU times the malpractice GPCI. And then they always have a conversion that factor. That conversion factor is kind of equivalent to a DRG-U8 [phonetic]. In other words, for this procedure, what was that conversion factor to say. This is how much we think it's going to cost you times that base amount. And again, they have the same formula for the facility pricing. When you start with that conversion factor, that base price amount for any type of procedure or HCPC was 34 dollars. So again, all these other things go into it. Any questions on payment systems before I kind of go into resources? OK. So, if you are really interested in looking at payment systems itself and looking at costing, doing modeling work, any want to know, well, I want to develop a new system because I think it would be better for CMS. There are resources that you can really understand what CMS is currently doing. I've given you the URL for all the different types of inpatient perspective payment systems. They're on the CMS website. I will say often times it really requires you to go into the federal register and I have to say getting through the federal register can be somewhat of an arduous process sometimes. There's a lot of pages to get to maybe the exact thing that you're interested in. But the federal register is always important that sometimes look at. And the CMS website will always give you the section of the federal register that is applicable to this specific payment system. I've also given you where you can go to look at the outpatient PPS, skilled nursing facilities, home health agencies. And then if you really are interested in looking at perspective payments and how CMS determines an IPPS, again, I'm going to be talking about acute hospital stays only looking at the MS-DRG payment. So again, the MS-DRG stands for Medicare Severity-Diagnosis Related Group. It is a patient classification system that describes the types of patients by severity that are treated by a hospital. And CMS has developed a group or again that determines what the MS-DRG is from data elements that are on the UB-04 claim, so the institutional claim. And then once they determine that MS-DRG, that just is one data element that goes into how CMS will calculate that perspective payment. So, what goes into the DRG group itself, they want to know the principal diagnosis, secondary diagnosis. CMS has recently expanded the diagnosis. However, I believe the group itself only goes up to 8 diagnosis but the more recent ones may have expanded that as well, principal procedure and secondary procedures currently, they only go up to six procedures but they have expanded the number of procedures in the files so I don't know if that will also be expanded in the groupers as well. The other two things

that go into looking at the category of where a person fits into the MS-DRG is the patient's sex and their discharge status. Did they die in the hospital or were they discharged a lie. So, when calculating it, there's two different formulas within one DRG perspective payment. You have a base--you have the operating cost that CMS will pay you for and then they also will pay you within this DRG for the capital cost of that hospital. So, Yvonne kind of touched that on that a little bit, the different cost that a hospital has and CMS will reimburse you for both operating and capital cost through the DRG payment on a claim by claim basis. It's not completely settled through cost reports. So, when you look at the base payment rate, it is comprised of a standardized amount and that standardized amount is divided into labor and non-labor shares, will be actually calculating on MS-DRG in our next exercise. Right now, these standardized amounts are also divided into what's called a full price or reduced update. They developed that split for really getting hospitals to submit quality information. So, if a hospital supplies quality data to CMS, they get the full price. If a hospital is not supplying their quality information to CMS, they get a 2 percent reduction in these base payment rates. So, it really is an effort for CMS to make sure that they are looking at quality of care because it does really hurt a hospital not to supply quality information because off the bat, you're already looking at a 2 percent reduction in your payment on a claim by claim basis. Furthermore, then once you get into the labor share, that is adjusted by a wage index that is applicable to where that hospital location is. So, a hospital in urban San Francisco will get paid a lot more than, you know, Lincoln, Nebraska because the wage costs are much higher for that hospital. The non-labor share for those that are--hospitals that are--hospitals that are in Alaska in a while will also further be adjusted by the cost of living for those two states.

^M00:20:05 And then this base payment is multiplied by the MS-DRG if you're interested in looking what is that payment is for that specific DRG. However, there can be further add-ons for particular hospitals. There is the disproportionate share, the DSH adjustment. So, for hospitals that serve a lot of low income patients, they get additional payments for that. And then also, teaching hospitals get an additional add-on payment. So, if you're going to a teaching hospital, their cost are usually going to be higher when you look at a teaching hospital compared to a similar one within the same area because they get this add-on payment for their IME adjustment, a direct medical education gets paid differently through the cost reporting systems. But as far as the IME, each hospital will get an adjustment for that. Now, there's other further add-ons that have happened. In the past, there used to be large urban add-on that I believe was standardized at o1.03, that larger, but hospitals automatically got as well. That went away for a number of years. And then beginning in fiscal year 2011 and '12 CMS developed a low volume adjustment for hospitals that had very low discharges to give them additional payments. Again, that changed back to the normal way of doing it in fiscal year 2013. But again, if you're really interested in particular types of hospitals, really understand how they're getting paid because some of these other additional adjustments are made as well. And then new ones that are just coming up in fiscal year 2013 and that are also implemented in 2014, two other new adjustments. One is called hospital readmission--excuse me, reduced

readmission. So, for hospitals that have actually relatively high readmission rates for three conditions, right now they are just looking at--they're looking at AMI, heart failure and pneumonia. So, if you're a hospital that has high readmission rates within 30 days, you're going to get a reduced price for your payments across the board because they really want to try to reduce readmission rates. Again, I talked about that full and reduced update prices to those standardized amounts. CMS for the beginning of fiscal year 2013, they are now into something called the Value Based Purchasing. Those are adjustments now for hospitals based on quality. So, in addition to still do you even submit your quality information, there is now an adjustment factor on your actual quality data. Do you have good quality measures? You're going to get paid more because you have good quality versus a hospital that maybe has poor quality measures. I said that it started in fiscal year 2013 which is October 1st, 2012. However, there were still some issues with the database and looking at quality measures so they're not going to start this adjustment until January 1st, 2013. So, again, a lot of times you have transitions. If you're looking at what the actual breakdowns of how a hospital gets paid. So, kind of understand that as well. And just FYI of that value based purchasing and the reduced, those are only applicable to the operating part of the DRG payment to the PPS payment. Those adjustments do not get applied to the capital where the DSH and IME gets applied both to the operating and the capital. So, if we actually look at the calculation for the IPPS operating payment. Again, it's just that standardized labor share of whether it's a full or reduced amount times the operating wage index for that hospital plus the standardized non-labor share times cost of living adjustment if that hospital happens to be located in Alaska, Hawaii. Then you multiply that times these other adjustments. And in the formula itself we use a 1, just to keep it simple when you're using the data, there'll be a zero in there and you don't want to multiply anything by a zero. But, so, you have 1 plus the operating IME and then operating DSH adjustment factor, they can be different from the capital adjustment factors. And then multiply that times the DRG weight itself. Similar to what the capital payment is for an MS-DRG, you have a standard Federal rate that they will provide you for the capital cost. It's multiplied by the gap, the geographic area factor. Again that depends on where the hospital is located, what type of a hospital it is. And then again, for hospitals in Alaska, Hawaii, you have the COLA and multiply times the DSH adjustment IME adjustment factors for that to get the MS-DRG weight. And then finally, you just add up the payment for the operating and the capital. There are other past through payment amounts that are not included in a DRG price. So, there is a variable called DRG price, that's not the total calculation of what a hospital may or may not be due. I've already mentioned that the direct cost of medical education is paid on a per resident payment amounts. So, that's not included on an adjustment factor. Other things that can be paid on a reasonable cost basis is a hospital bad debt. So, when CMS looks at the cost reports at the end of the year, a hospital may have a lot of bad debts. So, they'll say, "Going forward, we're just going to give you an extra 100 dollars per discharge to help you with your bad debt." Those are things that are above and beyond just the normal DRG, not included on how they calculate a PPS payment. And so, that gets into something called a pass through amount. You can study these, you can see what's

getting paid. Other things that are not included in the DRG's hospitals can get reimbursed for heart, liver, lung, kidney acquisition cost. So, for those of you that are looking at transplants, you'll always have some pass-though amounts for those types of surgeries. Other things that can again get included that are not necessarily included in the DRG are new technologies, you can get add-ons for that as well. Most technology though is included in the actual DRG price, if they've done it ahead of time. Now, so I've talked about what the base DRG price is, I've talked about some things and I can get paid has separate from a DRG and add-ons. But also Medicare will consider a really extensive or whether it had a lot of resources. And they might be eligible for additional payments has an outlier case. These outliers, you can still get operating and capital cost but it must exceed a fixed loss outlier threshold to qualify for an outlier payments. So, maybe it was a really long stay or a lot of complications. So, they had a lot of resource utilization. There's different ways to calculate that. I'm not going to go into detail, but if you want to look at an example of how to calculate an outlier payment they do have that at CMS. But again, there is a certain threshold that this hospitalization had to cost above this in order to be eligible for an outlier. Yes.
>> I'm just wondering if you could comment on dual eligibles. Like if they're Medicare and Medicaid and how that would work in terms of trying to figure out cost and reimbursement. I know it's not exactly on track but, you know, it's--would relate to the outlier.
>> That for dual eligibles, Medicare is the primary payer. And you'll find their claims in the Medicare data. So, dual eligibles are treated just like any other Medicare beneficiary. So, their cost for that hospitalization will be in there which you might not know is who actually paid the out of pocket cost. Did Medicaid happen to pick it up? You'll still see what the patient is responsible for in the Medicare files but did Medicaid pick that up, that's a different story. But as far as dual eligible to look exactly the same has any other beneficiary in the Medicare files.
>> So, Medicare like if there was an extended say Medicaid rather wouldn't pick that up? It would--I mean it would go to Medicare?
>> Right, so that--this is true for anyone. So, if I'm--whether I'm a dual or I'm a regular Medicare beneficiary. If I've used up my lifetime reserve days, I no longer--my hospitalization is no longer covered. That can often happen with Medicaid benificiaries who are maybe in Psych hospitals. They have very long extended their eligibility for Medicare coverage has run out. Then that would switch over to Medicaid payment that they would cover it. But that would be true for any beneficiary they've had to have some other type of private payer insurance that you won't find after a certain extent in the Medicare files because it's no longer covered. And those types of institutions know that Medicare is not really going to cover anymore. They may just stop submitting claims. That's true for those of you that are looking at post acute care again for those that are in field nursing facilities, they only have 120 days eligibility up before their Medicare coverage runs out for that episode of care. So, some SNFs know that this person no longer is covered by Medicare, they may just stop putting in claims, some SNFs will still continue to submit claims and have them denied.
^M00:30:09 So, anytime you're looking at timeframes or services that are

no longer eligible to be covered by Medicare, that's where you really loose the capability of studying those types of things with the Medicare data files. OK. So, another resource that CMS makes available in a lot of hospitals, institutions will use that they do create what's called Pricer programs or Pricer Software for every type of PPS system, you can actually download these Pricers and know that for this patient, this is what we're going to paid for for that claim. If you want to actually use the Pricer Software versus going through the trouble doing everything by hand which I'm going to make you do next. But bottom line is, they do have the information that will help you predict payment for services that they plan to provide. A lot of hospitals will actually use the Pricer Programs as well. But once they get paid, they had--most hospitals will calculate, we know what we're going to get paid. Once they get that check, if it's not what they're expecting, they may go back to that Pricer to determine, hey, what happened. So, it can now also validate what they might get as far as correct payments for Medicare. So, these provides Ann [assumed spelling] has researches, I put in researches, they do say that you know the software can only be used for what it's intended to be used. And it is a little bit difficult for researchers to use it. But if you just kind of want to understand how things get calculated and use it, it is something interesting to look at because it will easily calculate all the different pieces of that DRG, the capital cost, the operating cost, all that type of information. And I've given you the URL where you can download the Pricers. Again, if you're going to use this resource, you do have to have some, you know, specific bill information. What was the provider number? You do have to have a patient ID, it doesn't register whether or not this is a real one. So, you can just kind of make up a patient ID. You need to know what the DRG admission, discharge dates, that type of thing. But it does give you a length of stay. Total operating, capital amounts, outlier amounts, any DSH amounts, any IME amounts. So, it's something interesting that it might be good to just look at to see, yes, this is what goes into a DRG price payment. OK. Lastly if you've been looking at individuals versus institutions, again, CMS develops fee schedules which in essence are perspective payments for physicians, ambulance services, clinical lab services, durable medical equipment that includes prosthetics, orthotics, other types of supplies. And here's the URL where you can go to look up the fee schedules. So, for instance if you're interested in knowing a hospital--excuse me. A physician in a particular area, what is he going to get paid for this HCPC. You can go to this look up and I'll give you here--has--you have to say what has a GPCI will give you information back for a physician, clinical labs, DME and ambulance fee schedules. So, the resource to actually calculate some of these physician payments ahead of time. You can look at pricing amounts, the payment policy indicators including the RBUs, what is that particular HCPC. The GPCI by a whole--single procedure or you can put a whole range in--give you that backed at information. So, if you're interested in radiology, you can just kind of put all the radiology codes in and get that information back for the PC Pricer. So again, it allows you to search on a national basis for a specific carrier. So, you're only interested in this particular state, it will give you that information. Or even with a large state has the specific carrier locality code because there's different prices within that state. It'll provide you all that information. So, again each page will

kind of help you get through the perspective payment fee schedule for physicians. So, just to summarize, when you're looking at cost, and how people are paid and reimbursed, it is important to know not only the payment system but the timing of it. So again, if you're not looking just at with one year, it's important to look at trending. Did the payment cost? Did it--new adjustments come into play, what was CMS reimbursing at that time. We're at a time now where CMS is really looking at cost of care and trying to look at different types of payment systems. We're talked about the bunch of payment initiative. Again, I apologize that's just really coming out, so I don't have a lot of information of how well those are populated and how to use some of those variables that you'll be finding in the Med profile that are related to those. So, I would have to say maybe give us another year for another cost report and cost economic workshop to really get into those. So, what I can focus on though is just really what you'll find right now to look at payments and what the systems are. So again, CMS does provide a lot of free information from their website that are downloadable that will provide you on how they create the payments for all these different systems.