CMS 2012 MEDICARE PRESCRIPTION DRUG BENEFIT SYMPOSIUM

MARCH 20-21, 2012
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Impact of Changes to LIS Status on Part D Utilization
Thomas Kornfield

Hi, everybody. Thanks for coming back. I know this is right after you've had a break and this is around pretty close to 4:00, so I know this is – I was thinking this morning I'm – I'm more of a morning person, and I know some people are night persons, but I don't know anybody that's a 4:00 person, so thanks.

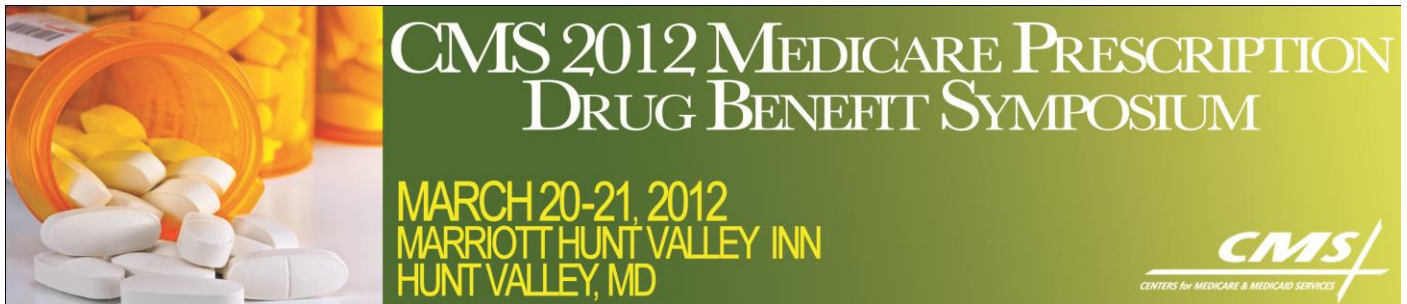Okay, so I don't have any disclosures except that I love chocolate.

Okay. And this is an overview and introduction of my slides. So as everyone I think here knows, the Part D benefit provides low income beneficiaries with reduced or eliminated cost sharing and that depends on your level of income and also somewhat your level of assets. What we're testing here is to see whether or not individuals who change low income status change their prescription drug utilization due to those changes in cost sharing.

So learning objectives is to analyze these changes in prescription drug utilization based on that low income – based on their changes in low income status. And then also determine which drug class has the highest expenditures for low income beneficiaries.

So this is just an overview of what the low income cost sharing categories are. As you can see, depending on your level of income, I did not put the asset information on here. There are some asset tests I believe. But in any event the – the coinsurance rates and the copayments vary depending on what group you're in. And this is all – this is all in 2010, so this is all prior to any of the changes due to the Affordable Care Act with respect to coverage gap. So is my methodology.

So I used data from what's called the Integrated Data Repository at CMS to identify beneficiaries who were either low income in 2009 and not in 2010 or the converse, low income in 2010 and not in 2009. The Integrated Data Repository has data on Medicare enrollment. It has data on prescription drug claims. It has data on Medicare claims. It's a very large data warehouse that basically houses a lot of data, or big data I think you guys have probably heard in the media, so this is sort of our – this is Medicare's big data.

The enrollment requirements here, you – a person in order to be sampled would have to be in a plan for each month from January 2009 through December 2010, so anybody who changed plans, or I'm sorry, anyone who didn't go with continuous enrollment throughout that time period was – was not included in the sample. They had to be enrolled in the same plan throughout the year so they could – they could move from one plan to the next the following year, but for the purposes of this, I tried to keep it fairly simple. And I also excluded people who changed – did not change address during the year. There were some people that had claims from one address and then later in the year they were from another address, so those were people that I – that I left off because I was trying to sort of control for different geographic impacts. So they had to have twelve months of continuous low income status in either 2009 or 2010, meaning that they couldn't move from being, you know, what we call sort of institutional – let's say a, you know, the lowest level or the sort of the – the – the what I had talked about earlier with these, so they couldn't move from one – between these different categories within the year, they had to stay within the same category throughout the year.

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These are just some basic study population characteristics. As you can see the – the number of people that were low income in 2009 and not in 2010 was much greater, it was about – about 80,000. And then the – the number that was low income in 2010 and not in 2009 was about 20,000 or so. And then the – there was a small – there were a small number of people who were deceased as of when I ran this – this study, which was about now, basically, when I pulled the data, so most of these individuals were deceased in 2011 or 2012. You recall somebody had to be continually enrolled throughout the time period, so that by its very nature excluded a number of people who were low income in 2009 but not in 2010.

This slide shows differences based on the original reason for entitlement for Medicare. So people can become eligible for Medicare due to they age into the program, they have a disability, or they're – or they have ESRD. So what's important to note here, a couple things. One is you'll see that the – the fraction of people that became eligible due to disability are the highest fraction in both groups, although it's a smaller fraction within the one with drug claims than the ones without drug claims. But that doesn't mean that those are necessarily under the age of 65 because people can become eligible for Medicare due to disability and then, you know, that status stays with them even as they age into the program.
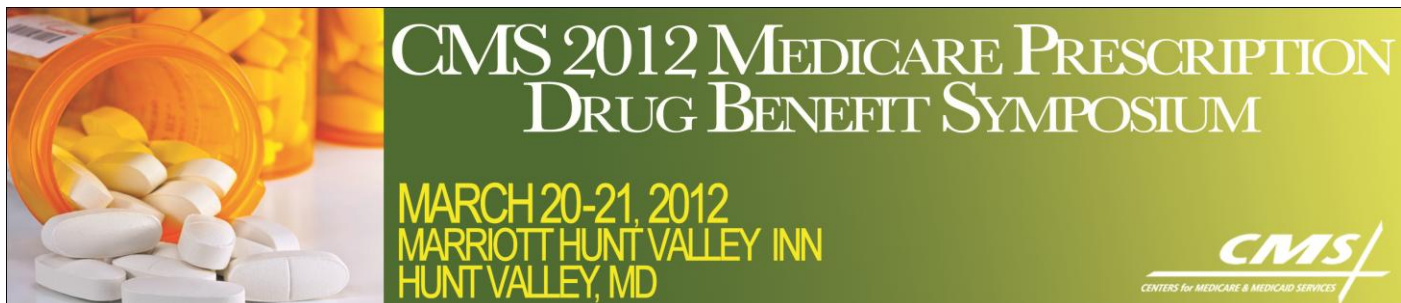
This shows differences in enrollment. Most of the people, as you'd expect, were in prescription drug plans – standalone prescription drug plans. The number that were in an HMO or a local PPO, that did kind of – is sort of different between the low income 2010 and not 2009 group versus the low income 2009 and not 2010 group. I know there are some small numbers on there. There's a slight little – where you see the 171 and 193, those are ones in other plan types such as PACE or cost plans. Private fee-for-service is – you can see it's a fairly small number. Part of that I think is by virtue of when the data were pulled, because this is I think after some shifts had happened in enrollment, so private fee-for-service was sort of less of the enrollment than it had been previously.

So this shows distribution, and you can see there's a big spike at 65 based on gender and age for the low income 2009 but not 2010 population. So the individual – the males, their average age is less than females, and you can see the distribution of the – the data there. Again, you can see that the largest group appears to be the 65 year olds.

And then we can kind of toggle back and forth between these two, you'll see that the age for the 2010 but not 2009 group, that's a – is different than what we saw for the 2009 but not 2010 group. So here it's, you know, the top one averages, again, male and female average age, 69. Seventy-five is the one at the bottom for females. And we go back to this slide, you can see that it's, you know, substantially older. For whatever reason. That's just sort of how the – how the data turned out. And it's, remember, it's a smaller number of people, and they are older. On average.

There were a number of people – not, I shouldn't say a number. I think it's – I think the percentages were somewhat consistent with what Cynthia talked about this morning in her presentation, around seven to ten percent of folks that didn't have prescription drug claims. And in general those – those folks tended to be younger. On average they were 57. You can see that they tend to trend more towards the lower end. If you look at the – the top graph as compared to the bottom graph, you see sort of those bars are higher for those same age groups. And again there's that spike at 65 as you'd expect.

This one looks at – this – this slide looks at the difference between prescription drug plans and non-prescription drug plans and what they're average ages are and how they distributed. Again prescription drug plans tend to be younger than those that are in the non-prescription drug plans. The non-

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prescription drug plans, those are primarily HMOs. I think as we talked about one of the other slides, the second – second largest group is probably – I think the – I think it actually – it may be the private fee-for-service. That one.

So this shows distribution of the low income enrollees who had a status change. This is – this sort of closely maps with where the low income beneficiaries live. If I were to show you a map of low income beneficiaries, you'd see that it would be somewhat similar to this. Los Angeles is sort of the high area. Phoenix, Miami, New York. And what's interesting about this, as we look at the next map, then we kind of are talking about the fraction of people that are low income so, recall, again, from Cynthia's presentation, about ten million people are low income and enrolled in – well, ten – ten million low income people in – in prescription drug plans of some kind or another.

When we look here, we see that Connecticut for some reason has a fairly high percentage of low income beneficiaries that changed. I believe this is the – the ones that were 09 versus 10. And other parts of the country, it's sort of a mixed bag. Los Angeles is sort of on the smaller end. Miami is on the lower end percentagewise of the – the folks that changed.

So there are definite, sort of – there's definitely something going on in Connecticut. I don't really know what it is. You know, I would say it has something to do with Yale because my father went to Harvard, but I don't even know what kind of joke I can make about that, so I'll just move on.
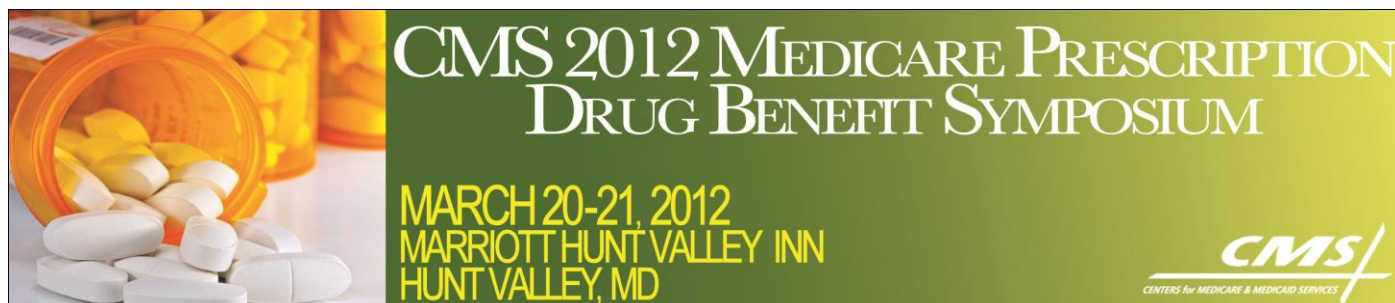
So there were folks that switched plans. And the way I – the way I determined plan switchers was based on the parent organization that we have in our database. And I should note that in looking at the data there were some parent organizations where the spelling changed slightly, and that sort of may have led to some changes that are not true changes, but I don't think that that's the bulk of it. I think that does happen on some occasions.

So a couple things to see from this. One is the percentage of folks that – that changed plans who were beneficiaries with no drug claims is higher for the folks in the low income 2009 not 2010 than it is in the low income 2010 not 2009 group. And you can see, you know, about – looks like about 13,000 folks switched plans that were in that 2009 group. And about 60-something thousand, 64,000, I think, didn't switch plans.

So now we're looking at what – what happened, the actual results of the data. So the number of prescriptions for brand drugs for these folks that moved from low income to not being low income, it dropped among – these are the top – these are the top ten classes as arranged by their 2009 spending. You can see that every single group it drops. Some of the drops are sort of larger than – than others. This is – this is just the number of prescriptions. This isn't the number – this isn't the total spending, which is going to be on the next slide.

So here we can see the antipsychotics, which had been the highest one now is – is quite lower. Also the percentage – I believe the percentage of brand was – was pretty high for the antipsychotics. I don't have the exact numbers with me. But in looking at the data I remember seeing that that one was one that sort of leaped out at me, if you will.

Now we've got the total spending for top ten classes based on the 2009 spending. And this is just total spending. Here, again, you see the antipsychotics that had been the highest. These are arranged based on their 2009 spending. So the anticonvulsants were the lowest, antipsychotics the highest. But then

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when you get to 2010, it's a different – it's a different picture. The antidiabetics are now the highest and antipsychotics are much lower.

And then within the 2010 and not 2009 low income population, we see a similar kind of trend where total spending in 2010, while it's similar in terms of being the converse of what we had just talked about because now instead of somebody losing low income status, they're gaining it, and when they gain the low income status, it appears their spending is higher within each of these categories.

So this is just to sort of give you – gives you a sense of what the differences in spending and risk score are between the different groups, so you've got – and most of these are statistically significant, like they all are. And what we also see here is this was a smaller sample so I – I tried to take a – I think it's a ten percent sample here so that it wasn't sort of, you know, confounded by the fact that there was a very large \INAUDIBLE\ in the standard error.

So then we see for the low income 2010 not 2009, now we see these – the data are not necessarily statistically significant. So while there's a higher average spending per script and total covered plan paid and total spending, I don't know that you can necessarily reject the null hypothesis here that – that – that those two are equivalent. And that's different than what we saw for the 2009 group where, you know, there's a difference and it is statistically significant.
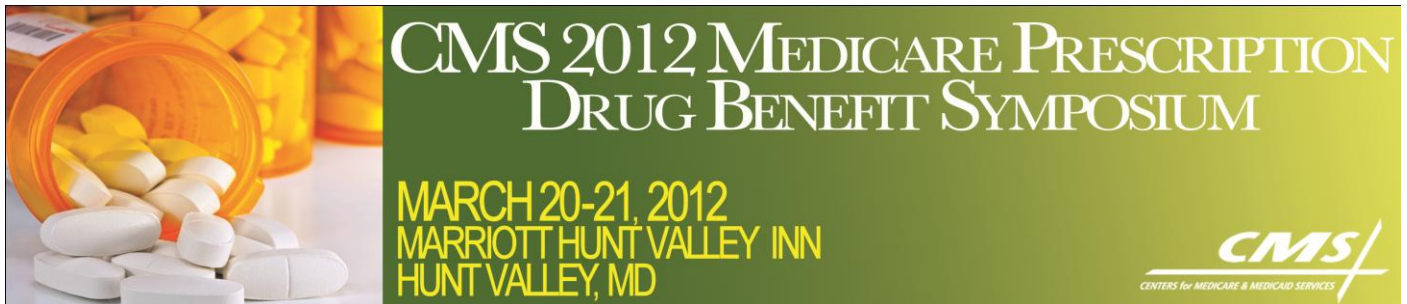
So now we've got the different groups, age, disability, ESRD, in terms of their total spending the disability group has a fairly large drop in their spending. These are low income 2009 not 2010. You see gender. There's a larger drop for the females than in the males, but the males are higher for both pieces. And that's – both the male and female ones are statistically significant for their total spending. The risk score, females not really statistically significant. The difference in the male risk score is, though.

And these are just by plan type. You can see each plan type, there's a drop, and the HMO and PDP are statistically significant. The other ones I don't believe are. So the local PPO has an increase which is sort of the converse to everything else that's going on for all the other plan types.

Now I looked at – because the data are sort of skewed and we have a fair number of – we have some outliers so I think there were a couple of cases of beneficiaries that had as much as $200,000 in spending, so what I did here was exclude those that had those high spending, so I just looked at people that were less than $10,000 in spending. And we see that the median spending is lower and the average spending is lower.

So this just kind of gives you a sense of what the distribution spending – I know you peop – people are probably like, well, this isn't in my slides. You're right, it's not. This is a new slide that I – that we will – I think – I think it'll be uploaded with – with the new slides. But what we can see here is that the average risk score is – is higher and the average risk score increases with each one of the total spending categories, which is kind of a nice confirmation that the risk model is doing what it's supposed to do. And we can also see sort of the distribution of enrollees by spending category. And you can see that in each one of the spending categories once you get above $500 there's a – there's a decrease.

And similarly, this just looks at the percent of people that had a decrease and those that had an increase, and you can see that the – the ones that had a decrease is – it's a greater number of people within each one of these categories with the exception, maybe, of the less than 200.

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So this again shows us the – the 2010 – this is the low income in 2010 and not 2009 group. And we see here median spending is higher in 2010 than not 2009. Here, again, we're looking at just beneficiaries with less than $10,000 expending.

So, there's a potential for future research here. I – I would say that the study that I looked at was kind of just looking at pulling – pull the low income data for these beneficiaries. I pulled risk score data. I pulled prescription drug claims. But I wasn't able to do any kind of progression analysis to sort of isolate which – which characteristics were affecting the result. So one idea would be to conduct an aggression analysis where you have the change in total drug costs could be your dependent variable and your independent variable could be age, Part D risk score, Medicaid status. The regression could be conducted separately for different groups. And you could also predict the likelihood that a beneficiary would use the brand name prescription drug. As we see there were pretty significant differences that we saw in the prescription drug use of brands versus generics – of brand drugs, excuse me – once you moved from having low income status to non-low income status. And it's not entirely clear sort of what's driving that. Obviously there's sort of the cost-sharing piece of it. But one – one question I sort of have is – is there more switching going on when a beneficiary is not low income and the plan is not sort of supporting that switching. It was just something I was thinking about. Again, I don't – I'm hypothesizing, I don't really know the answer. It was just something I was thinking about as looking – as I was looking at the data.

So, conclusion. A small number of individuals changed low income status from 09 to 2010. It's about 10,000 people, I think we had. There were more people that lost than gained low income status, so I think the – the number that gained low income status was about 20,000 versus the number that lost it was somewhere around 60 or 70,000. The loss of that low income status tends to lead to lower prescription drug use and less brand prescription drug use, so folks are using less brand drugs, and they're also just using less drug – prescription drugs in general. And then some future research could look at how these changes in spending are affected by these other characteristics.
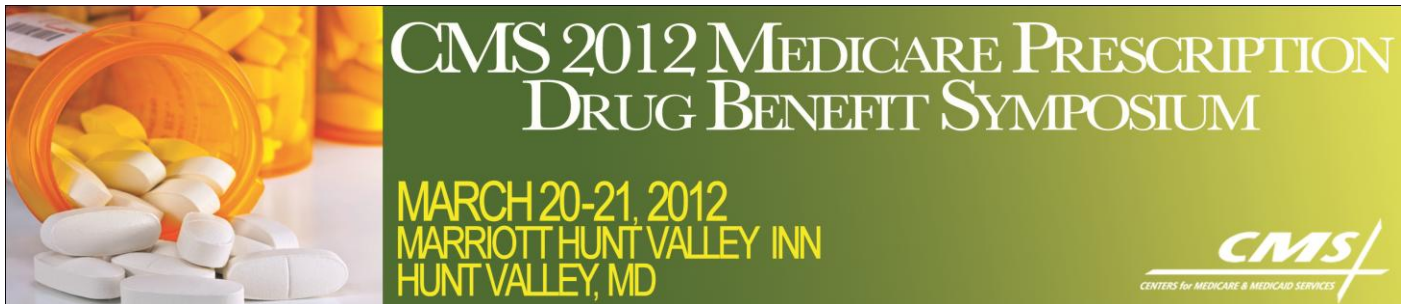
Okay. So now we're in the assessment piece. All right. So, I'm sure you're all old hats – old hats at this? I'm not sure if that's the expression, but. I'm sure everybody is familiar with these cards by now, and, you know, you're probably going to, you know, you'll, like, you'll be able to draw them now because you've seen them so much.

Anyway, so set the channel to Hunt Valley 41 and it's time to conduct the assessment. Please get out the cards and as a reminder, if you're seeking CPE credit, you must respond to all assessment and evaluation questions.

So the first question. How much higher are prescription drug expenditures for individuals in the year after they obtain low income status? Please vote now. You have ten seconds.

All right. This one actually has two correct answers. So it's not a case where you can negotiate an answer. I – I – I'm not – I'm not that sophisticated. It's – it's more that this sort of deals with statistical significance that I talked about, so no difference is correct because they're not statistically significant, but, you know, if you sort of put that aside, they are more than ten percent higher. If you look at that – that – the slides that show sort of the average 2010 expenditures versus 2009 expenditures for individuals that this is the year after they obtain low income status, so this is going from 2009 to 2010.

Okay. Which drug class has the highest expenditures for low income beneficiaries in 2010? So these are people that were low income in 2010. Okay? Blood sugar lowering drugs, or diabetes drugs,

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triglyceride and cholesterol-lowering drugs, hyperlipidemia, high blood pressure, hypertension drugs, antidementia drugs, or none of the above. Please vote now. You have ten seconds.

All right. Okay, the answer is 5, E. This is a little tricky. So the psychotherapeutic drugs are the highest group. So these were people that were, again, if you could look at slide 19, you'll see that that's the highest in the red line. And so it's not one of the four groups, so therefore that's the highest group.

So, with that, I think, you want to do the QA?

Sure.