CMS - Reports Eliot Fishman

Eliot Fishman:
My name is Eliot Fishman, and I am here from Metropolitan Jewish Health System where I am the vice president for research, and I'm here with my colleague who's going to be sharing presenting duties with me today, Suzanne Tumeng [spelled phonetically], who is a research analyst at Metropolitan Jewish. And before I get started I wanted to first and foremost thank Dr. Chris Haffer [spelled phonetically] for not only making it possible for us to present here and pulling together this incredibly impressive gathering, but also in his other hat as director of the Health Outcome Survey for having supported us throughout the process and this really would not have been possible without that support.

I also wanted to thank Dr. Yael Harris [spelled phonetically], whose doctoral dissertation formed the basis of the analysis that we did and as somebody who did a doctoral dissertation myself I know what it means to have these long nights of the soul where you wonder if anybody's ever going to use this thing. I think some of you do as well. So, at least I get to live vicariously through her in using her dissertation. Metropolitan Jewish -- oh, and of course I need to thank the support that we had from the operational leadership in Elder Plan and specifically thank the teams of Linda Montella [spelled phonetically] and Louis Foust [spelled phonetically] and David Dionson [spelled phonetically], who really gave us tremendous support throughout this.

Metropolitan Jewish is an integrated delivery system in the New York area and Elder Plan is our Medicare advantage plan. It's actually a special needs plan and also it's the largest part of our system. And we are going to be talking today about how we've used HOS data to inform our quality measurement with an eye towards going through the details of the obstacles that we encountered, how we were able to overcome them, specifically by getting into individual level data rather than the aggregated reports that we all receive, some of the specific risk factors that you can get at with HOS data, how HOS supplements the other data sources that we have at our disposal and really we're going to try to make this an introductory how-to for all of you.

Elder Plan, as I mentioned, is a special needs plan, one of the nation's first special needs plans to focus on nursing home eligible individuals in the community. Our enrollment has almost doubled in the last several years. We operated from our inception until quite recently under a demonstration called the social HMO demonstration, and I mention that because it's going to be important for understanding why we were researching this particular topic. The social HMO benefit package included a personal care benefit, that is an unskilled, in home assistance benefit, as a supplement among other supplements to the regular Medicare benefit package and as that social HMO benefit was phasing out we wanted to look at what the impacts of that personal care benefit were.

So, in order to do that, we wanted to compare nursing home utilization for our membership to that of other Medicare advantage plans, and that is specifically where the HOS came in. And what we found is that while at the overall plan membership level that nursing home utilization looked similar, when we looked specifically at people who went

into the nursing home for short term rehab and what happened to them and when we looked at the frailest enrollees who were using the most personal care that we could see a dramatic difference and we'll be getting into that over the course of the presentation.

So, here's where we started. We started by looking at nursing home residents in our overall membership and comparing it to the general population and ours is much lower. And I think this kind of analysis is where most of us would start in looking at the question of how do we do in terms of keeping people out of nursing homes, but I think that most of us as objective observers would also then ask the next question, which is how can we really compare our Medicare advantage membership to the general Medicare population. Many of our plans have done so at one time or another, but it's not necessarily a valid comparison and that is why we turned to the Health Outcome Survey. And at this point I'm going to turn to my colleague Suzanne Tumeng to talk about how we used it.

Suzanne Tumeng:
So, we've looked at the HOS, so I'm going to skip over this slide. The only thing of note is we did use Wave 4 for this analysis and that was conducted baseline in 2001.

So, we wanted to estimate first the expected rate for our nursing home utilization in the plan. We did this by coming across a publication in an online database looking for nursing home utilization and Medicare managed care and what this model did was use a set of covariates to predict what the expected nursing home rate could be for an individual. And the model that doctor Harris had used, it involved several datasets including the HOS, MDS, Oscar [spelled phonetically] and EDB. It was a Cox [spelled phonetically] proportional hazard regression model, and what this does is it has a hazard function, which allows you to predict the hazard over a period of time and parameters that we would plug into this model. And it used several types of independent variables that are all found in the HOS, predisposing, enabling and need-based.

So, there were three big issues that we came across when we began this analysis and the first one is that HOS was looking at -- I'm sorry, Harris was looking at how depression was -- if there was a relationship between depression and nursing home admission, so she wanted to use specifically self-responders. However, we were looking at the larger plan membership, so we did want to look at non-responders and proxy responders. So, the second issue that we came across involved 490 of the members who had submitted a baseline HOS survey were somehow lost in follow-up. This was -- someone had brought this up on the floor before, but people that are disenrolled in between baseline and follow-up aren't tracked by the plan and because we wanted to look at individuals by responder type, it was really necessary that we could individually link their data to the type of responder. So, the third issue that we came across was because the standard CMS HOS report does not include all of the HOS measures, some of the predictor variables that we wanted to use were reported at a level of finer detail than were in the aggregated measures that you find on the performance measurement report. And the other problem was that we were substituting plan-wide measures for some of these variables because we did not -- we could not access individual level data.

So, based on a discussion we had with the chair of this conference, we requested from HOS a complete dataset including non-responders and this gave us the whole sample of plan members that had been given the baseline assessment. And it consisted of two main steps. We submitted a data use agreement, which was approved, and then we had our HOS dataset delivered along with an electronic user's guide, which has a data dictionary and describes all the fields that are collected and stored in the electronic files. And with this, what you can do is identify the relevant fields that you want to use for your analysis and import those into your database, any kind of relational database software, and then you can link your internal claims data by using unique identifiers, as Richard had mentioned. And what we were allowed to do by merging these two databases is track -- one was to report the actual values for the covariates that we needed in our model and to track the members' nursing home utilization over a period of time.

So, the complicating factors of this model. One was that Harris used the MDS sample for nursing home utilization so disenrollment was a censoring event for Harris, but we could not track members after they had disenrolled. The second part was that we did want to look at how our home care benefit was impacting nursing home utilization, if it was, so we wanted to look at the short term to long term conversion rate and the model had been built to predict nursing home utilization, but not necessarily a short term to long term conversion so it was any nursing home admission. There was a general assumption that she has in her paper that about 50 percent of stays do eventually become long term stays and there is a more recent paper that says it is around 40 percent, but the nature of the business has changed.

So, these are the actual independent variables that were used to predict nursing home utilization. There are disease status; there's functional status variables, demographics, income and home ownership. And this table shows Elder Plan's baseline HOS versus the Medicare advantage average and Elder Plan members are at a higher risk of nursing home admission, they have higher ADLs than the general Medicare population, they're older and less of them own homes.

So, these were the outcomes that we were able to generate by linking our internal claims data with the HOS dataset and this shows the actual nursing home rate was very similar to what was expected -- the expected rate predicted by the model, but of note at the bottom is our short term to long term conversion rate, which for Elder Plan members was around 17 percent. So, the results of the HOS analysis for all nursing home stays Elder Plan was similar or slightly lower than would have been predicted and the short term to long-term stays were lower than would have been predicted by Medicare advantage trends.

So, I'm going to pass the presentation back to Eliot who will talk about the personal care benefit.

Eliot Fishman:

What we wanted to do as a follow-up to that analysis of HOS is to dig into our claims and find out when you break out the individuals who are getting a lot of personal care, and this is a lot in relative terms because it was a benefit for -- the people who were using the maximum amount of benefit really three or four home visits a week. In the Medicaid world that would be considered a fairly modest amount of home care, but in the non-Medicaid world that's a lot more than people can get otherwise unless they can afford for private pay. We wanted to find out how that variation in utilization impacted whether they wound up in a nursing home.

So, to start we wanted to see if people who got more -- and PCW here stands for personal care worker -- people who got more personal care were frailer, because if you're going to do an analysis where you're trying to see how nursing home utilization varies based on personal care, you need to find out if in fact risk for nursing home is going up with personal care and in fact it was. There was a quite substantial correlation between frailty, and frailty here was captured using an index that was development by Kaiser Permanente, and use of personal care.

I'm going to skip ahead to the graphical version of this information. What you're looking at here is on the horizontal axis the dollar amount of personal care that an individual used among personal care users and on the vertical axis you're looking at average long term nursing home stays measured per 1,000 members per year. So, this is really quite a dramatic slide and what you're seeing is that as you're getting into two, three, four home care visits a week that it really does appear to be protective in terms of keeping people out of nursing homes. And our focus today is really on the how we got -- how we used this data rather than to the implications of this data, but I will say that, you know, I think that there are some important and interesting policy implications that come out of this.

We also took a look at, and this data is of course of interest to any Medicare advantage plan, how the use of the personal care benefit impacted hospitalizations. And I think these data are more suggestive than definitive, but there is a correlation here between people using more personal care and having a lower level of hospitalization, and this arguably could have to do with the additional supervision involved with personal care hours or perhaps literally the traumatic events due to falls that might be avoided by having somebody coming three, four times a week to assist with bathing or errands.

This is of course only a piece of what we're doing in quality improvement, and we have been trying to use all of the different data sources that we have at our disposal, so this analysis involved a lot of internal claims and the Health Outcomes Survey. Two years ago, one of our key performance measures was based on the CAHPS and trying to increase member satisfaction on access and availability. Last year, we introduced controlling high blood pressure off of the HEDIS measure and many of you will be familiar with the changes is what's considered well-controlled hypertension.

And I wanted to step back, I'll put this up so you're not looking at a black screen, and just sort of summarize what I think the implications of the presentation are as a whole. And the first is that the Health Outcomes Survey is an incredibly rich data source, and

there's just a lot of information about the risk factors involved with outcomes. And while we benefited from having an off the shelf model that we were trying to apply, that is also available for many other topics. There are researchers out there who are using the HOS and depending on what your interest is you may be able to find something similar. It was certainly a great help for us. But, even if you're just using this for internal analytics, you can do real risk adjusted outcomes.

You can do, and I say this when you're -- Suzanne and I, I mean, we're pretty smart, especially Suzanne, but there's just two of us and we did this and, you know, I don't think we have greater analytic resources, and there's a lot of support from HSAG [spelled phonetically] and from CMS. And just on a broader note apropos of that, there was a round of applause earlier for raising the concern, the very legitimate concern about the burden involved with quality reporting and quality analysis and of course CMS needs to be sensitive to that concern, but speaking as a plan and for all the plans here, I think it's incumbent upon us at the same time to continue to increase the sophistication of how we capture outcomes and to really push to do the extra level of analysis so we can stand behind those outcomes with confidence.

So, with that, again, I thank you, Chris, for the opportunity. And feel free to ask questions during the reception and at any later point.

[applause]

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