STANDING COMMITTEE READMISSIONS

Moderator: Standing Committee Readmissions
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OPERATOR: This is Conference #: 51530238

Operator: Welcome everyone. The webcast is about to begin. Please note today's call is being recorded. Please standby.

Zehra Shahab: Good afternoon. And welcome to the All-Cause Admissions and Readmissions SDS Trial Period Webinar Number Two. Thank you all for joining us today. My name is Zehra Shahab and I'm the project manager for the Admissions and Readmissions project.

Before we begin today's webinar, I'm going to give you an overview of the agenda for today's call.

If you could please all mute your lines on the – mute your computer, so we won't hear the feedback, we would really appreciate it.

(Off-mike)

Zehra Shahab: So, on the agenda is, first, the welcome and roll call. Then we will give you a brief background of the SDS trial period, how did we get here and the goal and purpose of this call.

We will review the empirical analysis that has been provided by the developers. We will open up for public and member comment period, and then we will follow with next steps and adjourn.

So with that, I wanted to include – introduce the NQF project staff. So first, I have on my team Erin O'Rourke who's the senior director for this project. My name is Zehra Shahab, I'm the project manager. Severa Chavez is the project analyst and Taroon Amin is the consultant for the project.

So with that, I would like to turn over to Severa for the roll call.

Severa Chavez: Thank you, Zehra. I will start with our co-chairs, John Bulger.

John Bulger: Here, yes.

Severa Chavez: Oh, and Cristie Travis. Cristie, are you on mute?

Cristie Upshaw Travis: No, can you hear me now?

Severa Chavez: Yes, we can. Thank you.

Cristie Upshaw Travis: Thank you.

Severa Chavez: Katherine Auger?

Katherine Auger: I'm here.

Severa Chavez: Frank Briggs?

Frank Briggs: I'm here.

Severa Chavez: Jo Ann Brooks?

Jo Ann Brooks: Present.

Severa Chavez: Mae Centeno?

Mae Centeno: Here.

Severa Chavez: Helen Chen? Dr. Chen did send us an e-mail saying she may be late. William Wesley Fields? Steven Fishbane? Paula Minton Foltz?

Paula Minton Foltz: I'm here.

Severa Chavez: Brian Foy?

Brian Foy: Present.

Severa Chavez: Laurent Glance?

Laurent Glance: Here.

Severa Chavez: Anthony Grigonis?

Anthony Grigonis: Here, thank you.

Severa Chavez: Bruce Hall?

Bruce Hall: Here.

Severa Chavez: Leslie Kelly Hall?

Leslie Kelly Hall: Present.

Severa Chavez: Paul Heidenreich?

Paul Heidenreich: Here.

Severa Chavez: Karen Joynt.

Karen Joynt: Here.

Severa Chavez: Sherrie Kaplan?

Sherrie Kaplan: Here.

Severa Chavez: Keith Lind?

Keith Lind: Yes, I'm here.

Severa Chavez: Paulette Niewczyk? Carol Raphael?

Carol Raphael: Here.

Severa Chavez: Pamela Roberts?

Pamela Roberts: Here.

Severa Chavez: Derek Robinson?

Derek Robinson: Present.

Severa Chavez: Was that Dr. Robinson?

Derek Robinson: I'm here. Here, thank you.

Severa Chavez: Thank you, Dr. Robinson, for making today's call. We did get your message.

Thomas Smith?

Thomas Smith: I'm here.

Severa Chavez: Thank you, everyone. And did anyone just join us?

OK. Thank you. And I'll now – here's Erin for the background and purpose of today's call.

Erin O'Rourke: Thank you, Zehra and Severa.

Before we begin reviewing the empirical analysis, I wanted to give you all some background information on NQF's trial period for sociodemographic or SDS adjustment.

The trial period grew out of the work of the SDS expert panel that NQF convened to consider if when and how outcome performance measure should be adjusted for SDS.

During this two-year period, which began in 2015, adjustment for our SDS factors is no longer prohibited by NQF policy. However, each measure must be assessed individually to determine if SDS adjustment is appropriate.

During the trial period, SDS factors should be considered as potential factors in the risk model if there is a conceptual reason for doing so.

Empirical analysis should be done on those SDS factors that have a conceptual relationship to determine their contribution to the model. SDS-adjusted and SDS risk-stratified measures will be accepted for evaluation with the appropriate conceptual and empirical analysis.

Finally, the Standing Committees will continue to evaluate the risk strategy as part of the assessment of validity.

To give everyone a quick reminder of how we got to where we are today with these particular measures, during the last review of Admissions and Readmissions measures for NQF endorsement, 17 measures were endorsed with the condition that they'd be reviewed for the need for SDS adjustment, because the evaluation of these measures began and ended prior to the start of the trial period.

The Standing Committee did not consider SDS factors as part of the risk adjustment approach during their initial review. But the NQF Board of Directors wanted to consider the potential impact of these out – the potential impact on the outcomes of these measures, given the impending start of a trial period.

To meet this condition for endorsement, the Standing Committee met in January 2015 to determine that 16 of the measures had a potential conceptual rationale for SDS adjustment and should enter the trial period.

The Standing Committee met again in September to review the SDS factors or variables that the developers plan to test in the empirical analysis of the risk adjustment model.

Today, we are asking you to review and discuss that empirical analysis and make recommendations about whether you would recommend endorsing the measures as submitted by the developer at this time.

We'll be discussing six of the measures today. The remaining measures will be discussed during our main webinar.

And the CSAC and NQF Board will review the Standing Committee's recommendations and appeals period will follow that decision.

So during this empirical analysis review, you are asked to review and discuss the analysis of the risk adjustment approach as it relates to validity criterion. Review and discuss the developer's decision to include or not include SDS factors in the risk adjustment approach based on the analysis provided. And finally, make a recommendation about the measure as submitted by the developer at this time.

So, essentially, the measure as it is laid out for you in the background materials that were provided.

Some of your options for what you can recommend including endorsing – if you – you can endorse the measure as it's submitted today without conditions. You could request the developer revise and resubmit. Or, we could discuss removing endorsement of the measure.

On that note, we do want to stress that the trial period is a learning process for everyone involved. And if the committee does not recommend endorsing the measures as submitted at this time, we'll be working with the Standing Committee and the developers to determine the best path forward.

Next slide.

So in this slide, you can see the guidance that was provided to the developers about submission of the empirical analysis. If the developer has decided to SDS adjust the measure, they need to submit updated reliability and validity testing and specification for a stratified version of the measure using these factors.

If the committee believes a conceptual relationship exist between the SDS factors and the outcomes, it should be tested empirically to confirm that relationship.

NQF does not recommend any particular analytic approach with which to assess empirical associations between SDS factors and outcomes, nor any

specific cutoff or threshold value for – to use for declaring the presence of an association.

The Standing Committee should examine the two steps of empirical analysis provided by the developer. First, reviewing the analysis and interpretation of the importance of the SDS variable in the risk adjustment model. Second, for the trial period, the measure developer must report and compare performance scores with and without SDS factors in the risk adjustment model.

Formal hypothesis testing is not required. But there should be a discussion about whether the differences in scores are substantial.

The committee is asked to evaluate the measures against the validity criterion based on the initial information provided about the impacts of SDS factors and discuss if the data are available, has the developer adequately demonstrated an empirical relationship between the variables and the model. Has the developer adequately described the rationale for risk adjustment approach including the variable selected for the model? And based on the intent of the measure, is this a valid risk adjustment approach?

Additionally, the committee is asked to consider if a performance measure includes SDS variables in its risk adjustment model. Has the developer provided the information required to stratify a clinically adjusted only version of the measure results for those SDS – those with SDS variables included?

For today's call, we've assigned lead discussants to each measure. The lead discussants will have five minutes to present on their measure. And we'll then open for committee discussion on the measure.

Lead discussants are asked to focus their presentation on how well the SDS variables represent the empirical relationship. If they agree with the developer's decision to include or not include SDS adjustment, if they recommend endorsing the measure as submitted by the developer at this time. And, if not, what their recommendation would be for that measure.

So before we begin discussing the measures, I wanted to point out a few things. On the webinar, you can see the link section which is all of the

materials needed for this call, the agenda, the developer's responses and the link to the SurveyMonkey where the committee can provide feedback on each of these measures.

As you can see on the agenda, the measures will be discussed according to groupings, measures whether they are conditions or procedure specific, setting specific, pediatric or population level measures.

Finally, the PDF with the developer responses is according to numerical order and there's a list of tabs on the left hand side which will take you to the information about each measure. So you can follow along in the PDF as we discuss each measure that will be listed on the applicable slide.

I also wanted to let the committee know that we have representatives from the measure developers on the line. If you have any outstanding questions about the analysis they provided, I would encourage you to ask the developers.

So before that, does anyone on the committee have any questions before we get started with discussion?

Zehra Shahab: Erin, before we get started, before we ask the committee for questions, I saw that Wes Fields was not able to dial in and have an open line. So operator, can you please open his line?

William Wesley Fields: I dialed back in, thanks very much. We're good.

Zehra Shahab: OK, great.

Erin O'Rourke: Thank you. If anyone else is having technical difficulties, please e-mail us so we can get – work with the operator to get your line open.

So then not hearing any questions at this time, I'll turn it over to our co-chairs to facilitate the discussion. John or Cristie, did you have any opening remarks before we get started?

Cristie Upshaw Travis: Well, not me.

John Bulger: OK.

Erin O'Rourke: All right.

John Bulger: I don't have any opening remarks but we'll just jump right into it. I want to say thank you to the staff for putting this together and kind of giving us that background.

The other thing, I guess, I would reiterate is that if you have any questions regarding the measures which we're going to talk about, please try to get them in today. So if anybody has any questions with about the measures or for the developers, that way, we don't have to kind of come back and then do questions later, if people have secondary questions. Obviously, if you come up with something you completely forgot about, that's fine and we'll try to get the questions answered before the voting deadline next week. But, you know, we'd like to try to use today's time to get all those questions out so people can feel comfortable with where they are.

So, we're starting with measure 0505, which is hospital 30-day all-cause risk-standardization readmission rate following acute myocardial infarction hospitalization. I think the easiest thing to do, there are four lead discussants for all those. I didn't put them in order so I can't claim that. But I think it's just easiest if we go right across as the way they're listed. And, remember you have the four questions we were asked to answer in this.

And, you know, not only everybody has – everybody, if you have something to add, please add it but also there's no reason if you have to repeat off of previous discussant has, you know, said which you were thinking, you can just reiterate that quick and move on.

So, we'll start with the – at the beginning with that measure.

(Off-mike)

Paul Heidenreich: OK. So this is Paul Heidenreich. I think I'm the first one, and I guess I'll try to limit to a minute and 15 seconds. So (inaudible) all four of us then in five minutes.

In regards to whether the SDS variables represent an empiric relationship, I think they did – I think they do – they're looking at three – they look at dual eligibility, African-American race, and then an AHRQ SES index which have seven census-based things related to income, education and the household status. And, they look at those both at the patient level and then combine at the hospital level in their model.

And they're (seeing) was not include SDS adjustment. I think primarily because they were concerned that, and I think this applies to all of them that adjusting the way these differences would also adjust the way differences in quality of care that are issues where there are – where different socioeconomic groups and race groups are being treated differently.

And so, that was our main issue. They also – they did (trust) these, they were all significant. So there was a relationship, although the overall impact was very (minimal) discrimination, and they also thought that was another reason why they – it was not deemed necessary to include it at this time.

I would say my own personal view applies to all of these is that, it's sort of impossible to answer what is the right thing to do without detailed analysis of actual quality of care, and where there's better evidence for discrimination. And that one should do both and have them both side by side.

So, I'll stop there.

I should say all of the index data were based on ZIP code, although they are – the measure developers are also looking at census block. I also finally want to commend them for doing outstanding job in addressing the issue.

Laurent Glance: This is Laurent Glance. I'm going to jump in. So I agree with all the points that Paul made. I think this is a (methodology) that's very, very strong measurement development group.

So one of the things that they did is they basically constructed two different sets of models, one without SDS and the other one with SDS. And then, they compared the point estimates for the risk-adjusted readmission rates between the SDS model and the standard model.

And when they did that using the Intraclass Correlation Coefficient, it found very nearly perfect agreement with an ICC of 0.999. So essentially, virtually no impact of including SDS variables on the identity of the – or on the performance of the hospitals in terms of AMI readmissions.

And they did that for all three different types of SDS variables, the dual eligibility, race and then the AHRQ SES index score.

So, what they're presenting is fairly strong evidence, I think, that including SDS in the risk adjustment model will not have a very significant impact on the identity of the performance outliers.

Zehra Shahab: Well, this is Zehra. I just wanted to jump in really quickly. We – I know you had said, Paul, that you only have a minute and a half, but each of the lead discussants will have about five minutes. So there's no rush for any of these measures. We have plenty of time for the discussion.

Paul Heidenreich: OK …

John Bulger: You reserved the rest of your time, right?

Paul Heidenreich: Yes, although I think if you add up the time, we're going to run out of time so not sure we'll get all through our measures. But thank you for that (also).

John Bulger: So Dr. Chen, I believe, is not on the call, correct?

All right, so, we'll keep moving to Paulette.

Erin O'Rourke: I believe Paulette was also not on the …

John Bulger: She's not on the call either, OK.

Erin O'Rourke: So I think if there's no other statements from the lead discussants, you could open for discussion …

John Bulger: Yes.

Erin O'Rourke: … for the committee.

John Bulger: So, is there anybody else that looked at this and had any comments or concerns?

And I would just say just a lead before that, the – you know, there are two measures that are from the same group that had very similar – because we're one of the ones on the lead discussion on and looking at it that has very similar comments and actually much of the pros in the questions were the same things.

But I think you guys hit on, you know, how they did this and what they looked at, and what they found. And I think that it's also fairly clear that the – for whatever it's worth that they – the developer has clear feelings about how they think it should go. Being that they bolted it in there answer to question number three. But I think that's worth noting.

Anybody else have any comments, questions, concerns around 0505?

Brian Foy: Yes, this is Brian Foy. And I hope you don't mind if I ask just a really quick process question.

John Bulger: Sure.

Brian Foy: I noticed that some of the variables that were evaluated are different amongst these measures. Is it implied then that there was no data to test some of the SDS variables that weren't tested for each measure? Or, can we – is it implied that there was some decision making that went on the behalf of the measure developers on which SDS variable they wish to test?

Erin O'Rourke: Hi, Brian, this is Erin from NQF. I can attempt to answer that. So we did not – NQF does not have a prescriptive approach to risk adjustment. So it was up to the developers to determine what factors they would have available for their analysis and ultimately which ones they would want to test and then include in the model.

Brian Foy: Thank you very much. I appreciate it.

Cristie Upshaw Travis: Erin, this is Cristie. You know, I was trying to refresh my memory too as to what we've done on prior webinars. But I do think that Appendix B in the material that we were given kind of summarized what we did on our September call. And I think it was on that call where the developers did, at least based on where their thinking was in September, kind of give us an idea as to what SDS variables they planned on analyzing as part of their empirical analysis.

John Bulger: Yes. And that's page 166 of the PDF with people who are – it was actually a chart which list, you know, the data sources and variables on what they were thinking.

Erin O'Rourke: Thanks for pointing that out, Cristie. That's a helpful reminder.

John Bulger: Other questions, comments on 0505?

Paul Heidenreich: So this is Paul Heidenreich again. And I – one thing I think that it was relevant is, there were – none of the – none of those things I think were specific to acute myocardial infarction. And they acknowledged while there are some data to – you know, to – specifically in AMI and SDS, if these things, you know, likely apply across all, you know, hospitalized patients in Medicare. And so it's not like anything they've discussed there is unique to acute M.I.

John Bulger: OK, thank you. Any other comments?

OK, Cristie?

Cristie Upshaw Travis: OK. Well, the second measure we're going to look at is 0695, it's hospital 30-day risk-standardized readmission rates following percutaneous coronary intervention. And I'm going to ask Mae if she'll go first.

Mae Centeno: Yes, thank you. So, for this measure, the developers chose to not include sociodemographic factors in their final risk-standardized model for this measure. However, they looked at gender and age and it was viewed as part of their 20 – it was included in their 20 clinical variables.

In their originally submitted measure, they analyzed data sets looking at race and dual eligibility using the MedPAR 2010. And in looking at the African-American population, there was a higher rate of readmission rate for hospitals with the highest proportion of African-American and same is – same was true for the hospitals with higher percents of dual eligible patients.

They came with a strong recommendation to not risk adjust for reasons that I can understand. I think it would be very difficult on someone coming in acute lead to collect all the sociodemographic factors or variables that could potentially be included in this analysis and especially in the fact that I was looking at their MedPAR, there – while there were some variability I think both in the proportion of African-American dual eligibility, the measures performed well across the board.

So, for my personal opinion, I would support the measure currently as is.

(Off-mike)

Cristie Upshaw Travis: OK. Thank you, Mae.

Mae Centeno: Thank you.

Cristie Upshaw Travis: Frank?

Frank Briggs: I concur. I think the other thing that the developers pointed out was the difficulty in trying to collect all this data on 650,000 cases in the database and the burden of work that that listed on in the abstraction process, (inaudible) to then likely lead to larger data (holes). And then, this potential impact of having those (holes) in the data around the (SDS), therefore not making it really a viable solution (inaudible). So, I do also agree with their final conclusion.

Cristie Upshaw Travis: Thank you. Steve.

Steven Fishbane, are you there?

Erin O'Rourke: Hi, Cristie …

Cristie Upshaw Travis: Are you on mute?

Erin O'Rourke: … he was not on the call when we took roll.

Cristie Upshaw Travis: Oh, OK, thank you. OK. I'll get to Pamela Roberts. Thank you for that reminder.

Pamela Roberts: Can you hear me?

Cristie Upshaw Travis: Yes.

Pamela Roberts: OK. Although I agree and I understand where the other two colleagues have discussed, there was a recent article that came out in circulatory – or Cardiovascular Quality and Outcomes in 2015 that was a policy commentary that talked about the future PCI readmission metric.

And in this article, they recommended even though that it's difficult to get the information that disparity may have some factors and they talk about – and they ended up in their conclusion that despite the limitations, we do PCI readmissions. It still offers an opportunity to improve value in cardiology care for looking at disparities.

So I just wanted to bring that up because it was a recent article that came out if we – if that has a new value for discussion.

Cristie Upshaw Travis: OK, thank you.

OK. For the rest of the committee, are there any comments or questions for the developers?

Keith Lind: Keith Lind at AARP, I have a question. So, I'm not clear about – I mean, they said that the effect were – the differences were only modest. So, to me, the feasibility of whether or not to make the adjustment is somewhat separate from whether or not the adjustment made a difference. And I see the percentage differences, you know, there's like 1 percent difference as I understand it.

But I'm not – it's not clear to me how much of a difference that would make in terms of – did they address that, did I dismiss that in terms of the impact on how many hospitals would be above or below the – would change status?

Cristie Upshaw Travis: Sure. I think we can have one of the developers answer that for us. Severa, somebody, can you …

Erin O'Rourke: Operator, could you open David Shahian's line?

Operator: David, your line is open.

Erin O'Rourke: Oh …

Cristie Upshaw Travis: No, go on.

Erin O'Rourke: Oh, I apologize, that's the wrong line. If you could open (Christina McClure), Jensen Chiu or (Lian Hans) lines.

Operator: (Christina's) line is open.

(Christina McClure): Hello there. This is (Christina McClure) with ACC. Thank you. I'll have to take that question back to get the specifics, but I – at least I'm recalling our analysis correctly, the overlap like we said was minimal and that we're afraid that if there is any adjustment, that late performance would be, you know, adjusted away. And then we also found that the hospitals that are the higher amount of African-American patients actually performed just as well as others.

Keith Lind: Thank you.

Cristie Upshaw Travis: Are there other questions or any follow ups to that response?

Thomas Smith: Hi, it's Tom Smith. I had a question. It, you know, we talked about this in our prior meetings and on the e-mail threads. And I think a lot of us have somewhat of a consensus that many of these analyses proposed are probably not robust enough to really tease apart the relative impact of disparities versus, you know, hospital quality.

So, I wonder whether a parsimonious approach might be to do what a lot of the measure developers have done, which is recommend that the measure be reported both ways, you know, with and without the SDS adjustments.

Now, if we were to recommend that, are we endorsing two different measures, we're endorsing one measurement – one measure with the requirement that it always be reported two different ways. Is it one measure with an option that a user could report it with or without the SDS adjustment? What does that mean to recommend that it would be reported both with and without the SDS factors?

Cristie Upshaw Travis: Erin, would you like to take that one?

Erin O'Rourke: Yes, let me take this one. And I also have Elisa Munthali, our V.P. of Quality Measurement here to help me with this one.

To be honest, I think this is something, if that recommendation is how the committee wants to go, that the measure should be always be reported together, that's a new option that we haven't quite thought of when we were putting together the guidance for the trial period. And we would need to think about how to operationalize that and what that would mean as far as endorsement.

The guidance we had was that, we would have one version that's endorsed with the specifications available to present the clinically adjusted only version. But, I don't think we'd really have discussed how we would handle if the committee feels those measures need to be presented side by side.

So, I would say, for the purposes of this call, if that's what you feel what would – should be done, please indicate that in the comment field on the SurveyMonkey and if we – to come to a consensus points around that, NQF staff will huddle and discuss how we'd operationalize that and get back to the committee with a definitive answer.

Sherrie Kaplan: This is Sherrie Kaplan. Can I ask a quick question?

Cristie Upshaw Travis: Yes.

Sherrie Kaplan: Is NQF tracking which – you know, which variables and what kinds of adjustment are being done and when and it does result in a shuffling around in the – in a distribution of hospitals or units being compared, versus when which variables and which kinds of procedures don't produce any kind of shuffling.

Because it strikes me, if we're patrolling the – if the developers are doing whatever they think is prudent for their specific measures that somebody should probably be keeping an eye on especially for common or similar measures which kinds of procedures may do result in that kind of shuffling and which don't.

Erin O'Rourke: Hi, Sherrie, this is Erin, I can take that one. We are collecting that data as part of our evaluation process for the trial period. And we'll be presenting that out at the end of the two years about what we've learned.

Sherrie Kaplan: Thanks a lot. That's very reassuring.

Cristie Upshaw Travis: Well, this is Cristie, I guess I had a follow-up question to the earlier one about reporting both the clinically adjusted only and then the SDS adjusted. I guess it was the – the use of the term reporting. And, not to say that we as a committee couldn't recommend that they'd be reported that way. Historically, I'm just not sure how much on the endorsement side of the house we've actually have much influence over how things are reported.

So I just bring that up because I guess that probably got drilled into my head when I – the first committee I was ever on. So I apologize. But, that was the first thing that came to my mind when that question came up earlier.

So I don't know, Erin, if there's any thoughts around that or not.

Erin O'Rourke: Sure. That's a helpful clarifying question. And, yes, ultimately, the committee does not have control over how a measure user ultimately reports their findings. So I think we have to really huddle about how we'd – if the committee feels both version should be endorsed, how we would message that to make sure your recommendation is out there for measure users that this

measure needs to be used together. And if you report the score of one, you should report the score of the other.

Cristie Upshaw Travis: Yes.

Taroon Amin: Erin, this is …

Cristie Upshaw Travis: OK, thank you.

Taroon Amin: … Taroon, if I could just jump in on that question as well. I just wanted to point out for the committee that essentially the task that's in front of us is to evaluate the robustness of the empirical analysis that's a follow up to the conversation that we've already had around the individual variables and if the developers provided their draft empirical analysis plan.

If the committee doesn't believe that the analysis that was done was officially robust to test the question of whether SDS factor should be included or not, this is the time to have that conversation with the developers. Because ultimately, the question that's in front of the committee is to make an up or down endorsement decision on looking at the final decision of the developer on whether to include the variables or not, and then ultimately make a decision on the endorsement.

The endorsement is, you know, to support the measure as specified or to support the measures with updated SDS specification. And ultimately, that's the question that's in front of the committee.

So I just want to provide clarity that, you know, if there is concern about the approach that the developers took in terms of the analysis that was done, we should have that conversation with the developers at this point since, you know, ultimately we do want to provide clarity to the developers on what exactly it is that we would like them to do, if it's more than what was already done.

Keeping in mind that NQF has not been traditionally specific in terms of defining the approaches that developers use to test their measures. That is not something that we've typically done. However, given the unique nature of

this trial period, it's important that we are specific in terms of what elements we would like the developers to enhance to test the question.

But ultimately, the committee at this point is making a decision of whether to continue endorsement of measure as specified or to agree with the developer's recommendations to include SDS in risk adjustment factor.

The question of how the measure is reported, to Cristie's point, is really outside the scope of the endorsement process. So the committee can make those recommendations, but ultimately, those are only recommendation. The committee's authority at this point is really to make an endorsement decision.

So Cristie, I don't know if that's helpful in terms of clarifying the role of this committee and the goals of this call.

Cristie Upshaw Travis: No, I think so. And thank you for reminding us, you know, of what we – the decision that we've got to reach and in the spirit of that. And I apologize because I'm not sure. I didn't write down who brought it up. But, it may have been you, Tom. But, it was around the issue of that – you know, a feeling amongst some that the analyses aren't robust enough.

It would help me to get a – to have a better understanding of what would make it more robust if you have a way of articulating that to help me think it through.

Bruce Hall: Well, Cristie and Taroon, this is Bruce Hall. And I would like to also follow what Taroon said, and make – and try to reach some clarity. And I know we've had this conversation for a long, long time.

But, let's say that today, a measure developer is presenting data that whatever they choose to adjust for, say, they just chose to adjust for race or something, and that in adjusting for race, they were not able to show significant differences. Then our committee today is voting on whether to let that measure go forward either with or without that adjustment that the developer proposed, and in this case, if it didn't make a big difference, I don't know that we would care.

I think what we would care about is, are we implicitly saying that in the future, no SDS adjustment is necessary? Because one attempt at showing a difference failed, or are we just saying this particular measure is not improved by SDS adjustment. We're not saying that SDS adjustment shouldn't occur in the future when better people have brighter ideas. We're just saying that this particular measure is not improved by the inclusion of that measure, of that risk adjustor.

Taroon Amin: So Bruce, that's an excellent question. Let me just jump in, Erin, if I can on that.

Really, it's the latter. It's – the committee is ultimately saying, given that the risk – the SDS factors that the developers provided does not make a material difference to the measure and does not need to be included in the measure.

That does not mean that there's a blanket statement that SDS factors do not influence readmission measures or any of these particular readmission measures at all. It's intended to say that there may be data limitations, the variables that were chosen, because of data limitation might still not be able to demonstrate differences. And ultimately, we would expect that further testing on these types of variables should be considered.

I would encourage the committee if there are additional, again, methods or data elements, or variables that you would like to see analyzed, again, that was partially the purpose of the call that we had prior on the conceptual work. To include that in the survey and also to have a discussion about that to provide some more guidance to the developers in terms of additional testing that you would like to see in the future that – but ultimately, the committee's decision right now is to evaluate, you know, what's in front of you, what's been presented by the developers given their best, you know, best thinking.

And again, this is a time to have some conversation with the developers to understand their thinking data limitations that they may have had in order to understand, you know, ultimately how the committee – how the developers came to the conclusions that they did.

Bruce, I don't know if that's a helpful clarification but it's important …

Bruce Hall: Yes, that's very helpful. That's very, very helpful, Taroon. So actually the way I would put that into concrete words in my head. So, for instance, in Missouri, where I am, our Missouri Hospital Association has put – has a public website in which it corrects publicly reported measures for the patient census tract poverty rate, and they show that vast majority of differences across Missouri hospitals go way.

So, just because no developer today is adjusting for census tract poverty rate doesn't mean we're saying it should never been done. We're saying, "Look, the measure in front of us today is not dramatically improved by inclusion of whatever the developers included, and so we think it should move on or be eliminated." But we're not saying, "Don't work on it further in the future."

Leslie Kelly Hall: This is Leslie Kelly Hall. And to build upon that then, if what we're saying is that the hospitals contribute significant ways to persistent disparities in patient outcomes, but those that we've noted here don't produce relevant changes to the outcomes of these measures.

Then, perhaps, this asks a bigger question which is, what socioeconomic factors contribute to differences across a much broader population that needs very specific measures or to the specific measures. And, maybe that is something that we need to take on or recommend to NQF to take on are the separate area that would inform much, much more measurements in the future.

The concern that I have is, if we do agree that hospitals do have ways to change outcomes and that these disparities are still persistent in the outcomes, then we have some obligation to try to measure and change that. We might just be applying the wrong tool to this job.

Paul Heidenreich: This is Paul Heidenreich. And along – Bruce said, that for some of the measure developers, I'd say for the first one, they would actually argue that your measure is being harmed by risk adjustment and that sort of goes back to the basic question of whether it's now – we're in our quality attempts.

And so, in some ways, it's not clear to me how to vote there because I think they're saying for that first one that that things – it changed the model slightly. Though, you know, you could say it wasn't large. But they felt that most likely, hurt our ability to measure quality and therefore we should never do it.

And so, that's sort of getting back and arguing the original question about whether we should be measuring this. And so I think there – and maybe that one applied to many of the measures, but I think it applies to them.

The other thing I noticed seeing is what's coming up, there's – with the administrative related measures, some people seemed to be like that – like they all could potentially be doing the things done in the first run, dual eligibility block race and the AHRQ census related data.

At some point, we may want to say that, "Listen, one should at least look at these measures if you have these – or these variables, if you have those variables available." How much might – PCI might have been able to do.

Sherrie Kaplan: This is Sherrie …

Cristie Upshaw Travis: Well, I think …

Sherrie Kaplan: … Kaplan.

Cristie Upshaw Travis: Yes …

Sherrie Kaplan: I don't want to slow us down but, you know, to follow up on the point just made, there's – there – at this point in time, and this actually speaks back to Taroon's point, I think just evolves into a conversation about attribution.

And, the attribution to the unit being compared of quality of care being disproportionately – or people of some – one, socioeconomic group, another having disparities in the quality of care provided by the units being compared as opposed to the characteristics that people bring in advance to the unit being the hospital or whatever, and the implications of that for their outcomes, independent of the quality of care being provided, is a dodgy problem.

And the Jackson Heart Study, for example, show that neighborhood disadvantage and neighborhood safety are two key factors in cardiovascular disease. So, you know, independent of socio – after adjustment for health behaviors and socioeconomic status.

So, I think this – Taroon said it correctly, this is kind of early days in the adjustment process. But I don't think us laboring through how – which variables are missing, how can they be better analyzed given the data sets being compared, I'm skeptical about our ability as a committee to take that on as opposed to looking at what we're looking at, did this particular analysis make a difference given what the variables, the – and the methods that the developer used, versus trying to take on, "Well, gee, they should have done it this way, or that way or these variables should be included", et cetera.

Taroon Amin: Sherrie, this is Taroon. Just to piggyback on that point, I would just – for the committee's sake, this kind of ducktails on a few of the points that were just made, the questions about the data, the questions about whether the variables are sufficient, the questions about the methodologies.

Again, we would welcome those comments to provide back to the developers as sort of guidance going forward. But rest assured, we have a disparity standing committee that was just convened that will be convened for quite sometime going forward under the leadership of (Marshall Chen).

And all of this information across all of the different projects of NQF, the data, the underlying data that was used to develop the measures, the variables that were selected by the developers and the empirical analysis results, all that will be evaluated across all of the projects to assess some of these more overarching questions about whether we're looking at the right variables, whether – and essentially, the underlying philosophical question of whether SDS adjustment is appropriate or not.

So, you know, I just – again, just reiterate sort of Sherrie's last point there, which is ultimately, committee needs to look at what's in front of them in terms of the developers, what they did, and then to make a decision about endorsement. And then we will look across all these projects and across all

these measures to go in more detail on some of these more philosophical discussions that we've been having.

Cristie Upshaw Travis: Well, Taroon, thank you for the …

Laurent Glance: This is Laurent Glance. I was just going to add a point. To me, I think that the essential analysis is whether or not the models with SDS agree substantially with the models without SDS in terms of the point estimates for the risk-adjusted readmission rates.

And when you see that those points essentially fall on a 45-degree line, which they do when you have an ICC of essentially 1.999, as long as you agree that the variables that they used as proxies for SDS are reasonable, I don't think that there's a lot of debate as to whether or not it makes a difference. It doesn't make a difference.

Now, one can argue that they're not using the right variables and in that case, it may be reasonable to go to the measure developer and say, "Well, you didn't consider such and such variables and we'd like to see new analysis."

But if we agree that the SDS variables included in the analysis are reasonable, and if the Intraclass Correlation Coefficient is very close to one, I don't think there should be not much need for debate.

Paul Heidenreich: I have a question. What is – what would be the right way to say it didn't make a difference because I'm not sure if the ICC – it would seem to me if there was a certain number of hospitals that went from outlier to non-outlier or vice versa, it would still be viewed us clinically relevant even if that ICC, say, across 4,000 hospitals was very close. You know what I'm saying?

Laurent Glance: So the other way to do this …

Paul Heidenreich: On the outlying hospitals.

Laurent Glance: So the other way to do this would be to use the cap analysis to look at how closely they agree in terms of quality outliers.

But, in my experience, if the ICC is very close to one, you're going to find that the level of agreement that you're going to see in terms of outlier classification is also going to be very, very good.

So, I don't think that would change things in a substantial way.

Cristie Upshaw Travis: Well, thank you for that discussion. I know it was helpful to me and, you know, I think kind of understanding what our job is today, but also being able to have this discussion so that we can share with NQF and also with the Disparities Committee. Because to a certain extent, the Disparities Committee, in my mind, is going to be – we're in a feet on the ground around it, where there going to be kind of a little bit more theoretical because we're having to make decisions about specific measures with this information.

So I do think our feedback will be very important to them as it will be from the other projects that are going through the SDS trial period. Because it's the very practical issues that you all have just all laid out that we're having to grapple with.

And so, you know, I think this will be very good information to them, and Erin and team, I'm sure somehow you all are capturing some of this discussion because it may not show up on the SurveyMonkey, or it may not show up in the vote. But I think it is very important as we kind of grapple with how did this move forward once we get through the trial period.

So kind of taking us back to Taroon's point, though, that for today, we're kind of focused on these measures that are before us, focus on whether or not we are going to recommend that they'd be endorsed as submitted by the developer. And in my mind, that means either with the SDS or without the SDS based on the developer's recommendation.

You know, I do want to be sure, while we've got the developers on the line, if there are anymore questions on 0695 that we have the chance, any clarifications or trying to understand the rationale that we have that opportunity.

So any other questions or comments on this one?

OK. Well, let's move onto 2514, and that's the risk-adjusted coronary artery bypass graft readmission rate.

And Bruce, you're the first lead discussant on this one.

Bruce Hall: OK, great. Well, this is a measure developed out of SDS data. And in every way, this is a measure that is very thoughtfully constructed.

If everyone has the document in front of them on page 51, under point number two, you can see the factors that were included in this reanalysis. Those factors included categories for race and ethnicity, as you can see, they have defined them. And then, a category for payer, as you can see, they have defined the mainly indicating Medicare and Medicaid as one category, Medicare in commercial without Medicaid as a category. And then other as a category, mostly patients with Medicare given the nature of this intervention.

So, under point number three, you can see the summary of what these developers are recommending. And, you can read the first paragraph, but it's actually the second short paragraph where they say, we recommend that the measure results be presented both ways with stratification and then with the model that includes the SDS factors as we just mentioned above.

In terms of what impact those factors have, if you flip onward to page 63 in the packet, you can kind of see the picture that Larry just talked about a moment ago, you can see there scatter plot of with and without. And you see a very powerful alignment of the two systems, but you do see some individual institutions falling off the line. In order to get a better sense of that, actually page – to go into page 64.

And on page 64, you could summarize that what happens when you add the SDS factors in, is that one hospital that used to be called worse than expected becomes as expected. So one hospital that would have initially been penalized if this were implemented in such a way as the 95 percent interval resulted in a penalty.

If that were the case, one hospital that was penalized without factors would become as expected. And two hospitals that used to be as expected would become penalized. And so this is out of 846 hospitals, basically one perspective on it is that one hospital would be rescued from being penalized and two hospitals would become penalized.

So, it goes back to what Larry and the others said a minute ago, you know, at what point does that become a – not statistic – at what point does that become a substantial change that we care about. I mean, obviously those individual hospitals are going to care about that. But at what point does that become a measure level change that we care about, and there's not an answer to that.

So, overall, I'll let the others make comments as well, again, a very thoughtfully developed measure with quite a bit of information supporting all of the analyses that they flipped through with the ultimate recommendation that this measure developer is comfortable reporting the measure in both ways moving forward.

I'll stop there.

Cristie Upshaw Travis: Thank you, Bruce. Is Ross on the phone? OK. And John?

John Bulger: Yes. Thank you. So – and I would agree with everything Bruce said. The only caveat that I'd add and, you know, I'll preface it by saying, you know, the other thing we've talked about in my time on this is that – and I think it was laid out well about how we're supposed to decide on which way we're voting on this, but I've always found that very difficult not to think about how these measures are used when we're making our decisions. Although I know, you know, we're talking about validity and reliability not so much used.

But, to Bruce's point, and he talked about – and I think it's well laid out by the developer, both their – the correlation that's on page 63 and the data on page 64, the way these measures are currently used from a payment standpoint by CMS is not at the 95th percentile. It's actually at the 50th percentile.

So, while there – the analysis of this shows that a very small number of hospitals moved at the 95th percentile, it's pretty clear that there're going to be a whole lot more hospitals that are going to move around the 50th percentile.

Now, you know, if you look at the graph on 63, it's probably some are moving up or some are moving down. But I think it's – it is probably worth noting that there – where these measures are currently used and how they're used out there in a national program so it's not as if it's just used locally that way, there would be, I think, a fair amount of movement. And that's applicable for most of these measures that are already in the, you know, the hospital value-based purchasing and other – in this case, the hospital readmission program measures.

Cristie Upshaw Travis: OK. Tom Smith?

Thomas Smith: Yes, I don't have anything to add to the prior comments about the analyses and the choice of variables and whether they were representative. I agree they were all sufficient.

I'm still a little bit stuck on this other issue which is why, you know, about the point earlier. The developer is actually recommending that the measure be presented in two different ways, stratified, you know, by SDS and then just stratified by clinical only.

Two questions, one is, I wonder whether the developer might comment on that now or maybe even consider changing that recommendation given the discussion we've had in the past 15 minutes. My second question is, what are we being asked to vote on, are we being asked to vote yes-no to the recommendation, recommendation being presented both ways? Or in the end, are we going to be asked to vote yes-no on SDS adjustment only, yes, no?

Cristie Upshaw Travis: Thank you, very good questions.

Would the developers like to comment on their recommendation and give us kind of a back – a little bit more background on how you came to that recommendation?

And I'm not sure who needs to have their line open.

Erin O'Rourke: (Nan), could you open David Shahian's to start?

Operator: David's line is open.

David Shahian: Hi, it's Dave Shahian. While it is true that the use of the SDS risk factors that we had available did not make a substantial difference for the overwhelming majority in hospitals, there were eight hospitals for which the classification would change. And, although it's true that there are, you know, a small number of those were either rescued from low outlier status or conferred with low outlier status, there were a number of other hospitals that changed from as expected to better than expected.

So there are eight hospitals that changed classification. And then if you look at the risk factors in those hospitals, it is – it does make sense intuitively, the hospitals that had a higher percentage of black and Hispanic patients or dual eligibility got – generally got better with risk adjustment, their results looked better.

And, the programs that presumably had a higher socioeconomic status population that had more Medicare and commercial patients actually look worse, because there are patients who weren't adjusted for. It was clear that they were dealing with a much less sick population. So, for those hospitals in an accountability and reimbursement environment that we would envision going forward, it would be very important conceivably to have risk adjustment.

But, on average, it doesn't make a lot of difference. So, for that reason, we felt that it was best to provide the capability to do it both ways. Stratification to assure that we were not adjusting away disparities, but adjustment to account for that small number of hospitals that do care for populations that are quite different in the average. So that's the rationale.

Cristie Upshaw Travis: Thank you.

Taroon or Erin, can you all comment on what we will be asked to actually vote on relative to this measure?

Erin O'Rourke: Sure. So, thank you for those comments. Those were helpful. I think given the guidance from the trial period and the clarification from developer, we would ask if you would make your recommendation on whether the SDS adjusted version should be endorsed. And the trial period guidance is that the clinically only version must also be made available so that you can stratify, as Dave was saying.

Cristie Upshaw Travis: OK. So does anybody need any additional clarification on that?

I think I got it. OK. All right. Well, Tom, thank you for bringing up those issues.

Anything else before we go to the full committee, Tom?

Thomas Smith: No, I'm good.

Cristie Upshaw Travis: OK. Well, thank you to the lead discussants. Are there any questions, comments or issues to delve into on this particular measure from the full committee?

Paula Minton Foltz: This is Paula Minton Foltz, and I just appreciate the developers' comments about the safe – it appears that those were the safety net hospitals that probably have more programs going on that would affect those populations and their health and welfare. And it's just kind of nice to hear that they were considering that those folks should be recognized by a side-by-side trial, or reporting.

Cristie Upshaw Travis: Thank you. Any other?

Paul Heidenreich: This is Paul. Just in terms of what we're voting, and I'll thank you for clarifying this, for when the measure developer has said, we don't think we should do risk adjustment, or what will we – what will we vote on that, because basically, they're saying, "We're not putting forward our risk-adjusted measure." So, is there anything to vote on then?

Taroon Amin: Cristie, can I just jump in on that?

Cristie Upshaw Travis: Yes.

Taroon Amin: It would be helpful from the developer to clarify in the final risk-adjustment model, because in question number eight, it states that the measure does not include SDS factors as Paul is describing right there, you know, right – you know, in the last comment.

So ultimately, what the committee is recommending is whether they agree with the final specifications that have been presented to the committee, which in this case, from my reading, but again, it would be helpful from the developer to clarify exactly what the committee is looking at, that the final recommendation from the developers do not include SDS factors in the model.

David, do you mind us clarifying that for the committee?

David Shahian: Sure. Remember that this is a measure that was previously endorsed before the – this new study period. So, we followed NQF and CMS recommendations at that time and did not include SDS factors.

So when it says the performance measure does not include SDS variables, I – you know, we should have said the performance measure currently or the performance measure as currently endorsed does not include SDS variables that refers to the published readmission model that we have.

And then we go on to show in the analysis that Dr. Hall presented, what happens when you do add these various risk factors.

So, as I view it, what you would be voting on would be maintaining the current measure which does not include SDS variables. But, also endorsing a companion measure which does include SDS variables, and then I think as Cristie and others have pointed out, the NQF generally has not endorsed particular ways of reporting.

But our plan would be – at STS, would be to report both types of measures, a risk adjusted and a non-SDS adjusted measure.

Paul Heidenreich: This is Paul again. So – but if the measure is unchanged from the previously endorsed measure, is there any reason to vote on it again, in this – and, you know, and this year?

That's for the NQF staff, I think.

Taroon Amin: Yes, that's a really good question. The question that we were asking of the committee is to, you know, whether it would be yes-no, would be to maintain endorsement because there might be a situation which you have a currently endorsed measure that the information that's presented to you makes you question whether it should continue endorsement.

So in this case, the question would be the maintained continued endorsement based on the information that is presented and the developer can go ahead and develop this companion that would be in SDS adjusted that would be – you know, that would be available to the community.

But ultimately, I mean, to a certain extent, I understand, Paul, your concern. I guess the – I mean, your comment, which is, is it really relevant to even discuss this anymore. I think, ultimately, what we would want from you is just the confirmation that to continue the endorsed version of this measure, continue the endorsement of this version – of the currently endorsed version of the measure.

And then the developers can go back and develop this SDS version of the measure to allow for the – to allow for a companion measure in the future.

David Shahian: Can I just raise a question? It's Dave Shahian. I think it is burdensome to ask developers to have to go back and go through the entire measure development and submission process again in addition to what the extent of analyses that have already presented here. Obviously, you make whatever decision you wish, but that seems burdensome to me.

Cristie Upshaw Travis: David, are there – you've fully specified the measure with the SDS variable in this submission.

David Shahian: Well, in this submission, we answered the questions that were requested, but we obviously have all the other information that would be required for SDS to submit a new model. It just – you know, I just – I'm speaking more broadly now, not so much even for STS, but I think for other developers. It just seems to me that asking everybody to go back to the drawing boards and do the entire, you know, submission process is a bit much …

Cristie Upshaw Travis: Well, I guess it's what – I guess I would like to get some clarification because I – my understanding was that going through this process that if the recommendation was to endorse with SDS risk adjustment that – then that's what the endorsed measure was.

So, I was not anticipating that there would be a whole another process that people would need to come back through it. But, I'd like Taroon or Erin to kind of clarify that for us.

Erin O'Rourke: Hi, Cristie. This is Erin. I can attempt to clarify, and Taroon, please jump in.

So, yes, you are correct in the intent of the process, it was that at this time, we would – the developers would revise their risk-adjustment models and add in the SDS factors if they felt there is a conceptual and empirical reason to do so. And then the SDS adjusted version if that is the model they put forward would be the NQF-endorsed version.

Conversely, if they felt there was no relationship and the model should not include SDS factors in the risk-adjustment model, they would put that forward at this time and the measure would be endorsed as is, if you will.

We did not envision there's being a separate process to go back at the drawing board and come forward with a new model.

And then to clarify the point about clinically adjusted only, essentially, that is subsumed in the SDS adjusted version of the measure. And the developers are required to put forward the specifications to compute a stratified, clinically, adjusted only version of the measure so that they can be compared.

Thomas Smith: Would the – it's Tom. Would the SurveyMonkey be better if it said – if it asked each of your for each measure to vote whether we would want it to be endorsed without SDS, with SDS, and maybe I shouldn't say this, but perhaps both, reported both?

And is that the question you're asking each of us to vote on for each measure, as opposed to saying, "Are you voting on the recommendation put forth", because some of the recommendations like this are in a gray zone, they're recommending both.

Erin O'Rourke: That's a fair point. So at this point, we really are asking you to vote on the model, the risk-adjustment model put forward by the developers in the information we sent you. However, we know there are some of these gray zones.

So, I think that's …

William Wesley Fields: You know, Erin …

Erin O'Rourke: … been discussed in those comments you could – oh, sorry.

William Wesley Fields: Yes, Erin, this is Wes. So I'm somewhat uncomfortable with your guidance. We've got 176 pages of discussion to review, where the permissive environment were allowing measures – measure developers to decide whether or not they want to do an adjustment for SDS. We're saying increasing amounts of nuance about the approaches and recommendations they make.

And my suspicion without having open SurveyMonkey, is most of this won't be reflected in the yes and no types of questions, or the lack of consistency across measures in terms of the approaches being recommended or taken.

Speaking for myself, I'd love to see at the end of this discussion or, you know, that's – at the appropriate point process, a summary maybe in a table from the staff about what exactly is being recommended by the developers and what the question for each measure is for the members of the committee, because I understand that these early days and early days had to be messy.

But we're already seeing a kind of a scattergram which, if nothing else, makes me feel like the SurveyMonkey process is going to just make it very difficult for us to even represent our own opinions about this, let alone, you know, what their committee's recommendations needs to be.

Erin O'Rourke: Sure, that's fair, to be honest.

We can send out a follow-up table about what is included in each measure and what we're asking you to vote on. And use that as an addendum to the SurveyMonkey.

William Wesley Fields: Yes. It would – I think for a (tam) guy like me, it would be a nice way to essentially have an open book test, where I can reference your own summary of what's been discussed and recommended before I give in my response, which hopefully will include my own thoughts on each measure.

Erin O'Rourke: OK. We can put something together and then get that out to you in the coming days so that you can have that while you're casting your votes.

William Wesley Fields: Thanks.

Cristie Upshaw Travis: Thank you, Erin. That's why they're calling this a trial period. We're trying.

So, any other comments or questions for the developers on 2514?

David Shahian: This is David Shahian. I just wanted to say something I probably should have said before I made any comments.

The only reason that I am presenting the information on this measure is that I led the development team for the original readmission measure. That was prior to becoming an NQF board member.

Normally, I recuse myself and don't get involve in any of these, but because I was involved in the original development, I'm on this call today strictly wearing my SDS hat and not my NQF board member hat. And I just – I hope that's acceptable. And I apologize for not having said that at the beginning.

Cristie Upshaw Travis: Well, thank you.

Male: This is a joke, but I think a lot of us might be more interested in your opinion with your other hat on.

David Shahian: I can't change that.

Male: Right.

Cristie Upshaw Travis: OK. Sounds good. Well, I think it's probably back to you, John, with 2515.

John Bulger: Yes, thank you.

So, 2515 is another CABG measure and is from the Yale-New Haven folks. And I think we have – Cristie, you're up first.

Cristie Upshaw Travis: Yes, I am. And I'm going to leave, you know, the kind of details and the analytical and statistical discussion to others who are probably or definitely more qualified than me.

I will bring out that this is the same develop – set of developers as our first discussion which was 0505.

And, essentially, it's the same framework that they use in that first measure that we discussed. Now, just being applied to the CABG.

As a reminder, the variables that they looked at were dual eligibility status, African-American race and the Agency for Healthcare Researching Quality's SDS index score.

Also, as a reminder, they did try to tease apart whether or not any differences were being driven at a patient level or a hospital level. They use a decomposition analysis to do that.

And they – although they did see some differences based upon that analysis, their overall recommendation because other analysis show that there'd be very little change in the model.

And also, their concern as we talked about earlier about, you know, really, unintentionally covering up differences in the quality of care, their recommendation, their strong recommendation was that SDS variables not be included in the model.

So, I think that's just kind of a high-level summary.

John Bulger: Yes, great. Thanks. Sherrie?

Sherrie Kaplan: Yes. That was a summary. The hospital level or mean absolute change in the hospitals for standardized readmission rates when they added the dual eligibility indicator was 100th of 1 percent.

And the ICCs were point – were basically, 1.99928. And the mean absolute change in these rates when they added the race indicator was even less than that. It was like 3000th of a percent.

And so, the recommendation was – and the c-statistic didn't change, et cetera, et cetera. So, there wasn't – these results don't suggest any compelling reason why SDS should be part of the measure and they did not recommend.

So, I have one quick question, and this is off base. So, you can – staff can tell me to shut up. But, there was a pretty impressive correlation – I mean, odds ratio for males, and my question to the developers was, are V.A. hospitals was part of this analysis or not?

Odds ratio was much less for males for readmissions.

Zehra Shahab: Operator, could you open up Susannah Bernheim's line to take that question?

Operator: Susannah's line is open.

Susannah Bernheim: Hi, this is Susannah. The answer is no, we do not include V.A. hospitals here. And I might defer to David Shahian on the odds ratio with males, because he probably knows from a clinical perspective better than I do.

Oh, maybe he's not on the call anymore or his line is now closed. But, yes, so we do see that there's a lower risk for men in our measure. But, I don't have a great answer for you, Sherrie, about why that is. But it's not because of the inclusion of the V.A.

Sherrie Kaplan: Well …

David Shahian: Is my line open?

Susannah Bernheim: Yes.

David Shahian: It's Dave, I'm sorry.

You know, in general, we were – the question had to do with the readmission for men versus women?

Sherrie Kaplan: Odds ratio for men is 0.77 compared to women. So I …

David Shahian: Yes.

Sherrie Kaplan: … and here's a rate that (David) is socioeconomic variables include social characteristics. So, is it the intent to maintain age and – I'm assuming it's the intent in addition to the clinical adjusters to maintain age and gender as part of the risk model, right?

Susannah Bernheim: Yes.

Sherrie Kaplan: OK. So, it's irrelevant. It just that for hospitals that have a substantial proportion of males, it could skew the results a tad.

So, as long as it's being adjusted and you don't have any confounding hospitals like VAs or stuff and (inaudible), then my question is moot. So, thank you.

Male: All right.

John Bulger: OK. Any other questions with that? Leslie, I believe.

Hello?

Zehra Shahab: Operator, do we still have Leslie Hall on the line?

Operator: Yes, her line is open.

John Bulger: Leslie.

Operator: Leslie, if you're on mute, please unmute your line.

Leslie Kelly Hall: Hi, yes, sorry. I'm sorry, I'm losing my voice so not talking as much.

John Bulger: Any comments on this measure, 2515?

Leslie Kelly Hall: No, I think it was back to the same issue. This was – this group was just so very strong about the fact that this could actually skew results. I find it very interesting.

And confusing, frankly, to see that it can and cannot matter depending on what variables are suggested which just indicates to me that we still don't know a lot about this.

John Bulger: Yes, great. Thank you. And Derek?

Derek Robinson: Good afternoon.

(Crosstalk)

Derek Robinson: I don't have any big comment with that. I think Cristie and Sherrie and Leslie have covered a landscape that I was going to comment on as well as to a previous discussant with the other measure that was (thought) the same developers.

John Bulger: OK. Any questions from the group for – or comments about the measure, or for the developers?

Bruce Hall: This is Bruce Hall. I just wanted to throw in, when I read this originally, I was struck not that the developers were saying it didn't matter, but more that for this group, the core groups that they feel that, you know, that the

performance is actually associated with aspects of hospital care that you do want to highlight and change.

And I think that's an important difference from saying the adjuster didn't matter. It's sort of back to the original question of whether adjusting for these things, you know, masks differences that we do care about.

Female: The other thing – Bruce, the other thing I observed and we both – I think both of us reviewed this one before, was that there is a significant association, they have pretty much the kitchen sink in here for comorbidities.

So, to the extent that poor people are sicker and they have a fairly impressive list of, although from a non-physician standpoint, a pretty impressive list of adjusters from the illness standpoint. There may not be much left for those variables but they were used, the dual eligibility and race, to explain in terms of variability between hospitals once you take into account their clinical risk factors.

John Bulger: Those are great points. Other comments or questions?

OK, Cristie.

Cristie Upshaw Travis: OK. Now, our last two measures are going to be pediatric and population level admissions and readmissions. And the first one is 2393, which is Pediatric All-Condition Readmission Measure. And, our first lead discussant is Katherine Auger.

Katherine Auger: Thank you. So this is a very well-developed measure and very well put together set of analyses. What the developers did was they included insurance, education and at a ZIP code level and then income at a ZIP code level.

The one metric that they did not include that I think other developers have included would be race, ethnicity and they did not include it and I – they don't really offer an explanation as to why they did not, but it was not included.

And what they found was they did a multilevel – I'm sorry, multivariable analysis and they found, of the three things that they looked at, insurance, education, income, the only thing that was associated with readmission was the insurance. So, therefore, they are recommended including insurance in their model as a SDS adjustment.

They did some nice comparisons of their previous work without the insurance and to the model with the insurance, the c-statistic improved very slightly from 0.708 to 0.710. Their calibration with insurance, their model is excellent.

The couple of questions that I had for the developers were, one, is I know we talked about ICC sort of as a – as one way to assess whether or not we think that including SDS measures is necessary. I don't specifically see an ICC. They did do a two-level model at one point in their analysis, so that would be one question, just ask the developers what the ICC was.

And then the other point that they make is, initially, in their model without insurance, there were 73 hospitals that were considered a – that had more than expected readmissions. And when they put in the insurance as a metric, it goes to 78 hospital, so an additional five hospitals, it's unclear to me from what they wrote if it was just five hospitals that moved or if there were other hospitals that moved as well and that some moved below and some moved up.

And so, the net gain was only five hospitals or if there were actually more hospitals moving. And just to remind people, this is not one of the measures that has thousands of hospitals. There were only, I believe, 183 hospitals. So, five hospitals moving would be about 2.5 percent of the population moving.

And then I guess, the final sort of point that I have on this metric is – and the developers don't get into this too much, is just sort of this philosophical, is it right to adjust for insurance in this type of model. So, you know, sure, adjusting for insurance can change the way hospitals perform, but is it allowing hospitals with high Medicaid rate to be poor performers by putting it into the model, and philosophically, I think I struggle a bit with that.

I think the other point that is specific to pediatrics, so therefore what's common in here is in a lot of cases – so, if we endorse this as something that, yes, we think that SDS is important to put into this pediatric measures and then – but then we said that the only way we know how to do that is – or the best way to do that is with insurance, there's a lot of times where that is not actually going to be feasible in the pediatric world because sometimes you are dealing with single payer like Medicaid databases.

So, in which case, it just feels a little philosophically odd to me to say, "Yes, we should include some SDS measures", but then, there's going to be a lot of times where we can't. And so, I would also appreciate sort of the groups and the developers' thoughts on that as well. Thank you.

Cristie Upshaw Travis: Well, those are great questions. Can we open up with developer's line to go in and respond to those now?

Erin O'Rourke: Sure. Operator, could you open up Sara Toomey and (Jason Jang's) line?

Operator: Sara's line is open.

Female: Sorry, (Jason), are you there?

Operator: (Jason) is not on, Sara's line is open.

Female: Is Mark Schuster's line open?

Operator: We do not have Mark dialed in.

Sara Toomey: OK. Wait one second. I just want to make sure our statistician is on so that I am not speaking. What I would say (inaudible), thank you. Do you have anybody else from Boston Children's on the line right now?

Erin O'Rourke: Sara, it looks like …

(Crosstalk)

Sara Toomey: … listening in.

Female: … has raised her hand. They're all together, Jessica Quinn, (Jason Jang) and (Carter) …

Operator: Jessica's line is open.

Mark Schuster: OK. Can you – it's Mark Schuster, I'm on Jess' line. Can you hear me?

Cristie Upshaw Travis: Yes.

Female: Yes, we can.

Mark Schuster: OK, thanks. Sorry, we didn't know how to let you know. It was just Quinn's line that we were using.

So, I will start. But, Sara Toomey or others might jump in. So in terms of the ICC, we use the Kendall correlation which, as we understand, is quite analogous and a reasonable choice there, if it's not, please let us know.

In terms of the second question that Dr. Auger asked – and also, let me start by saying thank you for such a thoughtful review. Only five moved, it wasn't like to only be 78, only five moved.

And then on the final one, I mean, that's really the philosophical question that's really the question dominating the whole day and what I'd say is that, first of all, among those five, two were hospitals dominated by republic and three were private.

(Off-mike)

Mark Schuster: Sorry, two were safety net hospitals and three were not safety net hospitals.

But – and if there was a use of the measure in a Medicaid database, I think that insurance are just fallout. It wouldn't be used in that kind of a database if the measure was being used to look at hospitals overall, then most hospitals would have at least some variation in insurance, but not, you know, some wouldn't have a lot. But in Medicaid database, I think the insurance drops out.

But the larger philosophical question, there are others on this call on the committee and with the other developers who are more expert than I, but I will say that we were viewing this as a way to mask a certain hospital, not giving as good care as one might hope.

We were viewing it as a way all of the case-mix adjustment as a way to say, "What is the readmission rate for each of these hospitals if they were taking care of the same patient population including a mix of patients with all the characteristics that are being case-mix adjusted for", so that it would say, "How were these hospitals doing if they each had X the same percent of Medicaid beneficiaries and private payers and uninsured families, et cetera?" So that was our perspective on it.

We do understand there's many perspectives on this, but we weren't viewing it as masking as opposed to being able to compare all these hospitals as if they had the same patient population.

So that was at least our perspective, but we're open to hearing what other say and to learning from others. And we did, as we listen to the earlier measure, wonder if this is a measure where there would be value in having the measure without SDS and with SDS, two choices for people to use.

Cristie Upshaw Travis: OK. Thank you.

Sara Toomey: I think – yes.

Cristie Upshaw Travis: Go on.

Sara Toomey: Oh, no. I think that's very helpful, Dr. Schuster, thank you.

Cristie Upshaw Travis: OK.

Sara Toomey: And I can definitely agree – I could definitely see where having two options might be useful for this metric, especially in its early stages, we see what – how different hospitals perform.

Cristie Upshaw Travis: So, Karen, Karen Joynt?

Karen Joynt: So, I didn't have much (be) on that. I agreed with the first assessment. I also think that what we're fundamentally having here is a philosophical discussion. And if you look at the results across multiple measures, the odds associated with sociodemographic status, at least the insurance measure, are pretty consistent and they're pretty consistent with what's been reported in the literature not only for readmissions, but also for admissions and other conditions.

They don't know that we're sort of digging up a new truth here, so much as we're trying to have the discussion about how we should think about either masking or revealing disparities, or making the measures more fair for those who are being judged. And I don't know how to get away from that philosophical tension when thinking about these measures because we know they'll be used how they are approved. So there is some baked in. It's hard to ignore that because there are some baked in endorsement of use.

The one thing I would add for the pediatric measure in terms of potential additional analyses is the limitations of being only in New York. I think it's probably pretty important and I understand that's a limitation of data. But it does suggest to me that if we think that these relationships might vary based on Medicaid generosity or other characteristics of state populations that may be worthwhile that that could be something important to dig into.

I will also raise another potential analysis for just measures in general of this type, which is trying to understand the consistency of the effect of the sociodemographic item. You know, the reason that I think we feel comfortable adjusting for medical risk is because we assume that the effect of renal failure on readmissions is relatively consistent across hospitals and we're not looking at discrimination against folks with renal failure.

We're looking at a sort of a, I don't know, biologic or clinical relationship. If we were to be that the disparity by sociodemographic item was widely divergent across hospitals, I think it might, versus very fix. It might help us think a little bit about what we know about the stability and the relationship of that item.

Cristie Upshaw Travis: Well, thank you for that. Very important point.

OK. Wes?

William Wesley Fields: Yes, I think this is a really fascinating measure and I appreciate the developer's response. And I think in many ways, this is the other end of the spectrum from the very focus discussions that we were talking about in terms of very specific procedures like CABG or PCI.

So, I very much endorse the basic concept that insurance status and Medicaid status, in particular, probably has a whole lot to do with readmission rates if it's for all conditions in this environment. And I think it is an important thing to be measured. And I think it's important not so much for just the protection of the providers, if you will, but for policymakers to understand that they are still, you know, tremendous in an acceptable amounts of challenges for members of Medicaid programs and further access, in particular, specialty services, anywhere but a hospital environment.

So, I'll leave with that except to say, I don't think this is philosophical at all. I think this is a very serious systemic problem. I think there's an acceptable amounts of variability between states in terms of how do you think about eligibility for Medicaid, and a (wide) reality, if you will, about the way policymakers think about funding Medicaid in a way which would allow families have adequate access to follow up following hospitalization for a large variety of conditions.

So, I think the developers have identified something that's not just significant, but structurally important for this Medicaid program as well as for the hospitals that are directly engaged in trying to provide good acute care, and then struggle with the very significant problem of readmission.

Cristie Upshaw Travis: Thank you, Wes. Paula?

Paula Minton Foltz: Yes. In the interest of time, I don't have much to add than the other discussants except for to mention that in states like Washington, like my own with large amounts of homelessness than of the idea of using ZIP is somewhat problematic.

Cristie Upshaw Travis: Thank you. Thank for that reminder. Keith?

Keith Lind: Yes, I agree with the previous comments. Just to emphasize a couple points, the – so the improvement is so small. You know, does 0.3 – the 0.3 percent improvement just makes me wonder if this was the Yale developers whether they would recommended it against using the adjustment, and it's just the result of who the developers are and what the recommendation is.

I would agree with Karen's point that the – that just using – basing it on New York State data raises questions in my mind about how reliable this would be as a national measure.

(Crosstalk)

William Wesley Fields: This is Wes. Let me just quickly underline that because I somewhat forgot to say.

I'm almost sure this test bed is skewed because New York State's kind of relatively generous program with, you know, substantial enrollment. And I really don't think that Medicaid eligibility or access to Medicaid-based services in communities is the same in many, many states as it appears to be in New York State. So I think this one really begs for further analysis and I think that this – that the issues are – or the variations probably understated because it is New York State data.

Keith Lind: I would just add one more point about the use of payer source as the adjuster. I mean, conceptually, it's a little bit concerning or suspect. I'm just wondering if the developer could address, is that just intended as a proxy for a socioeconomic status with – and was raised or other factors not available with sort of somebody raised that in the beginning? I'm just wondering more about why you chose payer source as the adjuster.

Mark Schuster: Is the line open? Can you hear me?

Cristie Upshaw Travis: Yes …

Male: Yes.

Cristie Upshaw Travis: … we can.

Mark Schuster: Oh, thanks. So, yes, it's all we had. I mean, payer source, basically, public versus private was all we had, so that's what we use. I mean, as Dr. Auger stated in the beginning, we also use ZIP code, you know, we geocoded median income in education level, but we didn't have any individual data, any individual variables available to use beyond insurance.

My thinking on – so, insurance is obviously imperfect and Medicaid – and partly because eligibility for Medicaid varies widely. But, I would think that a state that has higher eligibility or, you know, has more people who are able to a higher percentage of the kids being able to get Medicaid would, you know, if we're funding some effect there, I would have thought, although there's no guarantee that if we had all states that we've had even more of an effect that it's harder to show in effect when you're moving into a relatively higher resource group among the least resource. And that if you were in certain states where there's much lower percentage who have Medicaid eligibility, that you would have had a stronger effect.

That said, we did not have a strong effect here and we could have gone either way in terms of saying, "Look, it's a small effect and we think we should just scrap the variable", or it's a small effect, but it is an effect, it could be higher elsewhere. We think it should be proposed as a possible measure or to – or variable to include and then others will study it and explore it and see how it plays out.

But, we, frankly, are open to either approach. We're not – we don't want to come across as zealots for this variable. You know, we had the assignment and we try to do our best with the state that we were able to work with and the variables available. But we recognize that this is a border line finding and one's perspective could probably lead one to argue either side of whether it should be used and we are – we recognize that this is not a strong finding that really dictates the decision.

Cristie Upshaw Travis: Thank you. OK, are there any other questions or comments from the committee at large?

Bruce Hall: Well, this is Bruce Hall. I just – I know this has been said already, but in this case, a measure relying on Medicaid eligibility, I mean, there's fundamental issue about how generalizable that is. I know we've said – I know others have said this.

Cristie Upshaw Travis: OK. All right, well, thank you for reminding us with that, Bruce. I guess I'll turn it over to you, John, for 2414.

John Bulger: Great. So the – thank you, Cristie. The last measure is 2414, Pediatric Lower Respiratory Tract Infection. And Jo Ann, you're up first.

Jo Ann Brooks: Yes, I will. This measure very much mirror with 2393, but this is looking at lower respiratory infection readmissions.

In this, they evaluated three SDS areas, patient insurance as to the previous one, the median income with patient ZIP code, and the distribution of education within the ZIP code, use the same comprehensive all payer New York database. And they use data in this measure from 2013 and they analyzed over 17,000 eligible lower respiratory infection admissions in 126 hospitals. Of those admissions, 4.4 percent of patients had one or more unplanned readmissions within 30 days.

When they look at the three different measures of SDS, insurance came out as significant on the bivariate and multivariate analyses on this one as well.

When they put it in into the c-statistic on the lower respiratory infection core case-mix module was included to age, gender, 16 chronic condition indicators and in the chronic condition indicator count, the c-stat was 0.699 and when they added insurance in it, it had a small improvement to 0.701, so a small effect.

The p-value for goodness of fit was 0.99, indicated a good model calibration.

So in general, they – these measure developers recommend moving forward with insurance. I would say it is very much with the same – some of the concerns we've had on the previous measure regarding the (invitations) and

generalizability, Medicaid differences among states, et cetera. And I pass it off to the rest of the reviewers.

John Bulger: Great, thank you. Carol?

Carol, I don't think was on at the beginning.

(Crosstalk)

Female: … drop off early.

John Bulger: OK, so she's not on. And Anthony?

Anthony Grigonis: Yes. I have to agree that this subset, if you will, of the pediatric population sort of shows even in a more refund way that the impact of the insurance is less. There were no hospitals that changed in terms of – where they're not they meant, you know, had the difference in their readmissions when insurance was added.

So I think given the previous discussion, I would think that the recommendation should be not to include the insurance, especially given the fact that it was a specific state population and, of course, some of the other issues that were already presented for the – all-condition readmission measure for pediatric cases.

John Bulger: OK. Great. Thank you. And Brian?

Brian Foy: Yes. Last person to go here on these two measures, not a whole lot to add therefore, but maybe just one nuance is that I noticed the data set was for discharges in 2013. And so even in New York, I believe they expanded Medicare through the Affordable Care Act in 2014 and that's likely to even exasperate some of the differences across the nation that we're talking about. I wonder if even comparing those two years in New York would yield something interesting to say about this measure, but that's the (inaudible) that I have.

John Bulger: OK. Great. Thank you.

I do have one question and this comes back to Bruce's comment about Medicaid, and this may be to developers to answer. But, is there any thought on the generalizability in a pediatric population versus an adult population?

Does it make a difference in your mind?

Mark Schuster: Who are you asking?

John Bulger: The developers.

Mark Schuster: Oh, OK. Well, I think that it would be very hard to generalize from a pediatric to adult population. Or at least hard at the level of, it would be really important to rerun data with adults. You might get a clue from a pediatric population, but you have to run the data with adults and vice versa.

I think the differences are large enough between kids and adults that it most – it's a signal to search in a certain area to examine a variable, but not to assume that one can just use it if it works in one age group and then use it in the other. And …

John Bulger: Let me ask a question a different way. So, given the – in many states, there's a higher, at least, number of the pediatric population is a percentage of the entire pediatric population on Medicaid.

Generally, we would say it's not a generalizable measure in adults which is, I think, what Bruce was getting at is it – is there a feeling in a pediatric which I'm not as familiar with that it – and you obviously use that as one of your variables that it might be more generalizable in a pediatric population.

Mark Schuster: If I think I understand what you're saying, which is concern that in an adult population, a single state when there's wide variability of – for Medicaid eligibility cross states, a single state study gives you pause. And you're asking if doing this in a pediatric population with a single state study should also give you pause. If that's the question, I think, yes, I think being concerned about this thing as single state study is something to reflect on.

I do think that if we found a small effect in New York, we would find a larger effect elsewhere. But that's an empirical question that could be studied, although not easily given data that are actually available.

If we could have done other states, we would have happily done it and that would be challenging to do, but not impossible. New York has an all-payer claims database that's actually much more useable than most states have.

And in terms of publicly available data sets that you don't, you know, that are just available, they don't exist that include – at least in pediatrics, there's nothing that we could find to use, which is a challenge. But I think the questions being raised are quite valid. And – so if I did understand your initial question correctly, I don't think there's a difference in pediatrics, that means that you shouldn't have a concern about generalizing from one state to another – to all states. I think that's still a limitation and something to raise questions about.

Did I get your initial question right …

John Bulger: Yes, that's great. Thank you very much.

Any other questions or comments for the developers or just comments in general?

Karen Joynt: This is Karen Joynt. I have another quick question.

In all of these measures, we've talk about their current use for hospitals. Some of these measures are being expanded to be used for physicians, ACOs, you know, other organizations. And so I'm not sure that the test of how hospitals move is necessarily, the only test case that may be relevant to these measures in the future, is that something we need to consider or are we just supposed to consider how they're currently in use?

John Bulger: The staff has a comment on that? Or, is that – I mean, is that, you know, toward the use that we're not allowed to consider or, you know, what's the staff comment on that?

Erin O'Rourke: So at this point, we'd asked you to consider them as they're currently specified, including the level of analysis. So if they're specified at the facility level, if you consider it at that level, not about potential uses outside of what is NQF endorsed.

Karen Joynt: Thank you.

John Bulger: But what you're saying is essentially, though, NQF because these are considered the facility level issues endorsing at the facility level. We wouldn't be endorsing this at an ACO level or at a population level or …

Erin O'Rourke: That's correct, they would only be endorsed as specified at the facility level, other …

John Bulger: Yes.

Erin O'Rourke: … uses at the – other levels are using it not as it's endorsed.

John Bulger: Great. Thank you.

Erin O'Rourke: So if there's no other conversation on that measure, I know we are very behind time, but we do want to open briefly for our public and member comments. So operator, if you could compile the queue?

Operator: At this time, if you'd like to make a public comment, please press star then the number one on your telephone keypad.

And we have no public comments at this time.

Erin O'Rourke: Great, thank you.

So, we did want to briefly clarify what our next steps are because we recognize there was a lot of difficult issues that came up during today's call.

So, we will be putting together a cable as suggested that will hopefully facilitate you making a decision about each measure, that includes what exactly is include – the developer would be adjusting for in their final – the final model they put forward towards the committee. So we'll get that out to

the committee in the – hopefully tomorrow, facilitate your voting through the SurveyMonkey tool.

We also recognize important things as your questions came up during this call so we will be taking those to the Disparities Standing Committee off as they evaluate the trial period and provide guidance about this policy going forward.

I'd also encourage you, if you have any thoughts about the measure or how, perhaps, things could be different or points you'd want us to consider, to please put those in the free write category on the SurveyMonkey. We do want to capture all of that feedback and hopefully come forward with the best path forward.

But to reiterate Taroon's point, at this point in time, the committee is being asked to make an up or down decision about endorsing the measure as put forward by the developer at this time. And we will be following up with a summary table to help you know exactly what is included in that model.

Bruce Hall: This is Bruce Hall again. I would just please ask NQF colleagues, please do be careful with that because we've seen several examples where the developer may have investigated a handful of things and is actually only suggesting they would move one or two forward. So, please make sure to call out differences between what the developer proposed looking at and looked at versus what they would propose to actually move forward with.

Erin O'Rourke: Thanks, Bruce, we will. We'll make sure that's clear.

John Bulger: Great, thank you.

Erin O'Rourke: Great. So we did just want to remind you of a few upcoming dates, we'll have a Q&A call on April 27th. On May 13th, we'll have another webinar to discuss the empirical analysis of the remaining measures that were flagged for potential SDS adjustment.

June 8th and 9th, we have an in-person meeting here in – at the NQF offices in Washington, D.C. to review the next batch of measures coming in for endorsement.

The post-meeting follow-up call will then be June 21st, and be post-draft report call is October 5th. You'll be receiving travel logistics for the in-person meeting in May.

And just briefly here, our contact information, please follow up with any questions, concerns, things you'd like us to be sure to consider as we move forward with this, we're here and you can visit us anytime.

Great, thank you all again for participating today.

Any last questions before we wrap up?

Cristie Upshaw Travis: No, just …

John Bulger: Thanks.

Cristie Upshaw Travis: … thank you.

John Bulger: Yes, thank you, very good discussion.

Female: Thank you, John and Cristie for facilitating.

Female: OK.

John Bulger: Yes.

Female: Thanks, bye.

Female: OK.

John Bulger: Goodbye.

Female: Bye.

END