



U.S. Core Data for Interoperability Task Force

Transcript
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Virtual Meeting

Speakers

Name	Organization	Title
Christina Caraballo	Audacious Inquiry	Co-Chair
Terrence O'Malley	Massachusetts General Hospital	Co-Chair
Tina Esposito	Advocate Aurora Health	Member
Valerie Grey	New York eHealth Collaborative	Member
Ken Kawamoto	University of Utah Health	Member
Steven Lane	Sutter Health	Member
Leslie Lenert	Medical University of South Carolina	Member
Clem McDonald	National Library of Medicine	Member
Brett Oliver	Baptist Health	Member
Steve Ready	Norton Healthcare	Member
Sheryl Turney	Anthem Blue Cross Blue Shield	Member
Sasha TerMaat	Epic	Member
Lauren Richie	Office of the National Coordinator	Designated Federal Officer
Adam Wong	Office of the National Coordinator	Back up/ Support
Al Taylor	Office of the National Coordinator	Staff Lead
Johnny Bender	Office of the National Coordinator	SME

Operator

All lines are now bridged.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Good afternoon, everyone. Happy Friday. Welcome to the USCDI task force. We will get started with a brief roll call. Christina Caraballo?

Christina Caraballo – Audacious Inquiry – Co-Chair

Present.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Terry O'Malley?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Here.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Steven Lane?

Steven Lane – Sutter Health – Member

Here.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Brett Oliver? I believe he's going to be absent today. Sheryl Turney?

Sheryl Turney – Anthem Blue Cross Blue Shield – Member

Present.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Thank you. Les Lenert? Not yet? Okay. Ken Kawamoto?

Ken Kawamoto – University of Utah Health – Member

Present.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Clem McDonald? Valerie Grey? Tina Esposito? Steve Ready? And, Sasha TerMaat? Okay, if others join, we'll be sure to let you know. I'll turn it over to Christina and Terry to get us started.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Okay. Christina, do you want to do the intro, or shall I?

Christina Caraballo – Audacious Inquiry – Co-Chair

Either way.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Go ahead, if you'd like.

Christina Caraballo – Audacious Inquiry – Co-Chair

Okay. So, we have a lot to get through today, so we are going to jump right in. You can see our items – we're going to shift this around a little bit. We have put together a draft deck that we shared with everyone that we hope to use for our next HITAC meeting after some refinement on today's call, and again, like I said, we're hoping to get through some stuff, so we're going to dive right in and start on the bigger components, which are the promotion model criteria, submission form, and the ONC responsibilities slide that we put together, and then, after that, we'll go over the overarching goals of the model, the summary of the work to date, and the issues for the discussion slide that we put together. But, I think in the interests of time, we're going to jump right in and go to slide 12. Fair enough, Terry?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Yup.

Christina Caraballo – Audacious Inquiry – Co-Chair

Anything to add? I know I'm just going right in.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Nope, that's fine.

Christina Caraballo – Audacious Inquiry – Co-Chair

So, the next couple slides are the promotion criteria from when a data element is submitted, from Comment to Level 1, Level 1 to 2, and then, 2 to USCDI. This is a reflection of the Google Excel sheet that we were working on as a team on our last call. We just cleaned it up a little bit. One change that I wanted to note before we go through this is that on the far-right column, you'll see comments and concerns for ONC's consideration.

One of the things that we had wanted to recommend or that we're recommending as a task force is this concept of a user guide to help people understand exactly what's needed to move from one level to the next. And, as we were trying to put together those pieces, we realized that we're not going to be able to fill in each of the very specific parts of the user guide, but what we can do is start to identify questions, concerns, or considerations for ONC. So, as we move through this, we want to gather as much information that would be helpful in creating this user guide, but not necessarily create it within the confines of this set of recommendations. So, Terry, did you have anything to add to that overview, or are we ready to start?

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

I think we’ll go line by line in the ideas to make sure that this is clear and we’re stating what we want to state. A lot of this work was done very nicely two weeks ago, so hopefully, we won’t have a lot of cleaning up to do, but we will start off.

Steven Lane – Sutter Health – Member

And, if you’re willing, please read through it line by line for those of us who aren’t yet on the video part.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

Absolutely. And, Ken and Sheryl, any questions or concerns?

Sheryl Turney – Anthem Blue Cross Blue Shield – Member

Sounds good.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

Rock and roll. All right, Christina, I’ll read the few, and then you can have some too.

Christina Caraballo – Audacious Inquiry – Co-Chair

Go for it.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

So, the item is “Justification exists for data element capture and national exchange.” So, justification exists for the data element, and the use of this criterion would be to estimate potential significance, and it’s not required for advancement, and we’re just saying that ONC helps determine the significance of the data element being proposed. So, if you have any questions or concerns, just speak up, because otherwise, I’m just going to keep reading, and I’ll stop when anyone interjects. How’s that? All right. So, second line. “There are applicable use cases citing this data element.” Again, it’s for clarification. This is a requirement to be put into Level 1, and if you don’t have it, your data element goes to the Comments level.

Steven Lane – Sutter Health – Member

The use of the word “citing” seems a little off to me. Would “involving” be a better word? Use cases don’t always cite specific data elements.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

Okay. I have no problem with that. All in favor? Well, anyone opposed? We’ll do it that way. Okay, we’ll amend that to – I’m sorry, what was your verb?

Steven Lane – Sutter Health – Member

I said “involving.” It could be “utilizing,” but “citing” just seems like it might be misinterpreted.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

Okay, so, let's use "utilizing." Next one. "There are projects currently underway using this data element." Again, it's required for Level 1. If you don't have it, you're in Comments. Okay, next slide, please. The next one is "This data element is currently captured electronically in one or more electronic systems." It's just how feasible it is to get it. It's required for Level 1. If you don't have it, you're in Comments. Okay. The last one for me before handing it to Christina is "The following systems capture this data element at the noted level of prevalence using the following mechanisms." Okay, we may want to stop for that one. I'm not sure I read that before I typed it in there. The point of this is we've asked if it's currently being captured, and this is sort of a follow-up question. So, tell us which systems are capturing it, how often the element is captured – rarely, occasionally, always – and how it's captured. Perhaps we should just rephrase it in that way.

Steven Lane – Sutter Health – Member

Yeah, that second stab you took at it, Terry, was more understandable than the first.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Yeah, I'm not sure I still understand the first one. [Audio cuts out] [00:09:39] the systems cited above. How often the data element is collected...and how the data element is collected. Okay? Next slide, please, and Christina, you're on. I'll take notes, unless you want me to do it.

Christina Caraballo – Audacious Inquiry – Co-Chair

I'm on mute, sorry. So, "A content standard exists for this data element." The use is the technical maturity and feasibility. This is required for Level 1, and if not in Level 1 – if it doesn't meet this, it is in Comment. We had some concerns on this slide. We just put a note that only context standard or the existence of data element in this implementation guide is required, not both, so we're just trying to gather information at this point, and this does not have to be U.S.-specific.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Actually, Christina, I had separated the two out, so I put a new line in that says the next one is "An implementation guide exists." So, I just separated the content standard from the implementation guide.

Christina Caraballo – Audacious Inquiry – Co-Chair

When I was putting these notes, these are requirements, so when we split it, it changed the context from "or" to separate lines, so I just wanted to note that both of them weren't a requirement. It wasn't still an "and/or," since this is very early stages, and that's the reason for that note. Does that make sense? I can clean it up.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

It does to me.

Christina Caraballo – Audacious Inquiry – Co-Chair

Okay. Any comments on either one of those two? The next one, for those on the phone, is "An implementation guide exists that contains this data element." Okay. Moving to the next one, "There has been pilot Connect-a-Thon testing or production use of this data element." Again, we are gathering

information for technical maturity and feasibility and requirements to move from Comment to Level 1. One of our comments that we wrote in here is that this can be early stages. This requirement demonstrates that a standards development organization has initiated work and has interest.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Christina, Rob McClure has put a couple of comments in the chat going back to the use of the word “capture” not being clear. It looks like he’s really asking if this data element is encoded – whether it’s captured in a discrete field or is in free text. Gang, what do you think about “captured in a discrete field,” being encoded, or if it’s in free text?

Steven Lane – Sutter Health – Member

I think we’re still open to free text data elements at this point, aren’t we?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Yeah.

Steven Lane – Sutter Health – Member

Or, since we’re USCDI, does everything need to be discrete? That’s a really simple and important question.

Christina Caraballo – Audacious Inquiry – Co-Chair

I agree. This is a good question because at this point, we’re trying to figure out whether people are trying to electronically capture this, and there may be standards, but remember, this is Level 1. We’re not even at Level 2.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

I think the distinction that Rob is making is a helpful one, and it includes free text. This is really the work before SDO getting their hands on this data element.

Christina Caraballo – Audacious Inquiry – Co-Chair

I just copied and pasted Rob’s comments into our –

Ken Kawamoto – University of Utah Health – Member

This is Ken. I wonder if what Rob’s getting at is whether it’s structured versus free text. I wonder if that’s what he was getting after, not necessarily that there’s a standard, but the notion that – it’s different to say that at some point, this is recorded in free text. For example, let’s say the patient is homeless. Obviously, at some point, in some system, that’s going to be recorded, but that’s a separate issue from asking whether there are systems out there where that’s actually captured as structured data.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Well put. Rob agrees. Okay, great. Sorry, Christina.

Christina Caraballo – Audacious Inquiry – Co-Chair

Okay.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Are you on pilots and Connect-a-thons?

Christina Caraballo – Audacious Inquiry – Co-Chair

Didn't we just do that one?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Yup, we did it.

Christina Caraballo – Audacious Inquiry – Co-Chair

Okay, so, I think we can move to the next slide, unless anybody has any comments around that one. Okay. The next item is "The exchange of this data element has been successfully tested between two or more different platforms in a production environment." Again, it's for technical maturity and feasibility, and required for Level 2.

Ken Kawamoto – University of Utah Health – Member

I think that sounds good. Could you back up one slide? Was there one that was similar to this? I don't think there was.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

The Connect-a-Thon.

Ken Kawamoto – University of Utah Health – Member

It is similar. I guess the only notion there is "Connect-a-Thon" is a trademarked term by Oracle, so we may not – I don't know. I guess it's probably okay to use, but it is trademarked, and I have heard that the trademark owner has gone after folks who use the term, so I assume the government is immune, but anyway, "Connect-a-Thon" is a trademarked term that we may not be able to use.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Maybe we can put in "e.g." and a trademark next to it. So, the idea is gradually escalating technical specification and experience in exchange – so, going from Connect-a-Thon to two platforms in production, and then, the next one is four platforms, and that's how you're – you're going to need two to get into Level 2 and you're going to need four to get to USCDI. Christina, do you want to continue, or do you want me to pick up?

Christina Caraballo – Audacious Inquiry – Co-Chair

Go for it.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Next slide, please. Here we go. Here's "The data element has been successfully tested between four or more different platforms in a production environment." So, this is the big leagues. If you get to four, then that's a requirement to get to USCDI, and if you don't get this far, then you stay in Level 2. The

clarity of the question was added. What's the proper term for this question and the previous one? Is it "different platforms," or "unrelated platforms," or...? Is "different" close enough? Does it capture what we want? The reason "different" was picked instead of "unrelated" is that you could have different legacy systems within one parent corporation, and if you're able to change between your two different platforms even though they're related by governance and by ownership... The point was that they're not electronically related.

Adam Wong – Office of the National Coordinator for Health Information Technology – Back up/Support

Hey, Terry, this is Adam. This might be an instance where it might be useful to provide a couple of different examples and let those do the work in addition to finding the right term.

Ken Kawamoto – University of Utah Health – Member

This is interesting because according to this definition, let's say EHR vendors that have 70% of the U.S. market share overall are exchanging data in a production environment that would potentially not meet this requirement, which seems kind of silly.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

But, they'd have to be exchanging it with a separate, different platform. They couldn't just exchange it to their own iterations of the platform.

Ken Kawamoto – University of Utah Health – Member

I guess what I'm saying is – let's say three of the largest EHR vendors among themselves – within those systems – were sharing, but not with another system. We would be saying that does not count.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Correct.

Ken Kawamoto – University of Utah Health – Member

I'm just noting that that seems... Whereas you can imagine four systems that cumulatively have one percent of market share amongst themselves would qualify. What I'm getting at with that is that there isn't the notion of... An arbitrary number starts getting at the notion of – I don't know. Perhaps it's the case that if very large groups are on it, then smaller groups can be joined or will join, but I'm just bringing up the notion that this rule has no concept of relative scope, customer base, or things like that, which may be fine, but I'm just noting that it's not in there at all.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

You're making a great point, but I think it is exactly that point. It doesn't really have to do with customer base or scale. We're looking at whether the element is mature enough and has been tested in an exchange between different platforms. That's really the question. It's not that they're the biggest or the smallest, it's whether it's been done. Presumably, if you can do it among four, it doesn't really matter. That data element is probably ready to be required to be moved among everyone who's not moving it.

Ken Kawamoto – University of Utah Health – Member

I'll just play devil's advocate. Let's say you have four clinics, each with solo physicians, each of which has one-off systems, and they can connect among themselves. That would meet this requirement. I'm not saying that's the most common outcome, or even a likely one, I'm just saying that unless we have more criteria that includes judgment of the HITAC or ONC as a further bar...

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Points well taken, and fortunately, there is yet another bar. Once the element meets the criteria to get into USCDI, it's got one more hurdle, and that is that the HITAC and ONC have to weigh in on it, and I'm guessing there's a public comment period, so the public gets to weigh in on it. I think in your example, Ken, they would say, "Are you kidding?" if those are the only people who had done it. We're trying to figure out how you get to the levels, and again, this was one of the criteria, and it was meant to capture technical maturities. Do you think that's still okay to use for this, or do we want to modify it?

Ken Kawamoto – University of Utah Health – Member

Yeah, that's fine.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

All right. Next slide, please. The next group of slides... This is the set of questions that ONC asks or will ask of the data element, and it's really the strategic significance of the data element. So, the data element has passed the technical specification requirements, and now, ONC and the HITAC are going to say, "All right, that's nice, but..." The first "but" is that "Evidence exists for the impact of this data element on healthcare costs for individuals or populations," and presumably, you would then provide it as part of your submission. As the data element submitter, you would provide that information at some point. Then, we've got two more that are like this. Next slide, please.

The next one is that "There is an estimate of the number of providers who would use this data element and class," and the next one is "The following restrictions potentially limit the standardization of this data element. Let's go back to "There is an estimated number of providers," and the questions we had where what kind of evidence, what kind of experts, what kind of estimates, or what kind of published studies. Do we need to give any more guidance on what we would expect of a reasonable estimate?

Ken Kawamoto – University of Utah Health – Member

Rob commented on this for the cost one, too. I think it's probably not a requirement, and the estimate could be very back-of-the-napkin, I think. For example, let's say gender is the data element, and we're redoing this now. What would you put for the estimated financial impact/cost of sharing gender when we weren't? How would you even do that, other than say, "Obviously, it's really important in a lot of clinical care decisions"? Estimates would be "a lot of money." An estimate of the number of providers who would use it – obviously, it's almost every provider. And, I think that's probably okay. I think it's good to ask people to think about it and discuss it. I think it's unreasonable to say you have to have a publication. If we had a bar for needing to have a publication on the estimate of the financial impact of having gender shared across systems, that would be kind of crazy.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Agreed. That's a good point. So, basically, just say "provide an estimate..." I guess the point is whether this is even necessary, because ONC is perfectly capable of doing the same estimates.

Ken Kawamoto – University of Utah Health – Member

If they have it available, it's nice, and of course, estimates are going to depend on perspective. Cost and benefit are two sides. We're asking about benefits, and we should also ask about what kind of costs we're talking about. I assume the healthcare cost will include the cost to providers. It might be worthwhile to make that explicit, but a big part of the cost might be "We didn't used to have a checkbox on whether the patient is homeless, and now we're asking. How much is that going to cost to ask every patient, and to collect it?"

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Right. Again, great points, and on this slide, there are four soft questions. One is the estimate, the next one is to indicate what restrictions potentially limit the standardization of this data element, which really gets to whether this is a proprietary code, the third one is whether there are any restrictions that potentially limit the use of this data element, such as needing a licensing fee, and then, the fourth one is whether there's an overall burden to implementation. I think that gets to your final point, Ken.

Ken Kawamoto – University of Utah Health – Member

There's definitely an overlap with the other one about cost. I think these are great questions. I think the only question on the cost one is whether we want to phrase it so that it doesn't overlap with these or whatnot, but as an explicit issue, I might suggest that in the earlier one, we just ask people to comment and say, for example, from different perspectives. Cost is different for an individual, for society, or for a healthcare system, depending on the payment models, and I don't think it's reasonable to say you have to do financial analyses from all these perspectives, but I think it might also be reasonable to say, "Hey, you might want to think about this and all these different ways of thinking about the problem." And, what we're doing here, for example, in the last row on this one, is explicitly saying, "I want you to think about the cost to implementers." The third one is cost to the healthcare system for collecting this information.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Okay. Actually, the place to make those edits – if these questions are okay, because these are essentially the criteria that ONC will use. We'll go to the submission form, and maybe where we're asking the submitter for that information, that's where we put some of the qualifying verbiage that you're offering, Ken. It just says, "Please provide the estimate, from your perspective, of blah blah blah."

Ken Kawamoto – University of Utah Health – Member

Yeah, that sounds perfect.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Rob, we see your comments about how it's way too high a bar, so, hopefully, we've lowered it reasonably. I think that's it for the promotion criteria. Are there any overall comments or anything you think we missed? Hearing none, Christina, I think on your outline, the next thing we're going to look at

is the data element submission form, which is – slide 11 is a high-level slide, and then, slides 29 to 32 are the details. So, this is the high level. Five sections – identification – so, if you think of the submission form as the user guide for the submitters – identify the data element, justify why it should be promoted, tell us how extensive the use is and the technical specifications around it, tell us the potential impact, and tell us the potential barriers. Those are the five big sections. Slides 29 to 32 break that apart into more specific details, and the details in the submission form mirror exactly what ONC is using as promotion criteria. Christina, do you want to do this part, or do you want me to keep going?

Christina Caraballo – Audacious Inquiry – Co-Chair

Sure. We've got the first section – I'm pulling it up – with the identification of the data element, and the fields that we're trying to capture are the name of the proposer, contact information of the proposer, the data element, the data element description, any related data elements, whether this is a proposed data class, which is optional, and if similar data elements currently reside in the...what's that?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

UDA. Maybe we should explain that. Anyway, this is a proposed name for the USFDA Data Element Advisory. It took the verbiage from the ISA, which says this is the ONC process for identifying, sharing, and publicizing the existence of data elements.

Christina Caraballo – Audacious Inquiry – Co-Chair

[Inaudible] [00:34:34] our acronyms.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Yeah. It's a terrible acronym, but anyway... So, instead of saying it's the process that does that in two sentences, it's the UDA.

Ken Kawamoto – University of Utah Health – Member

Is that an acronym, or is that just a soft, proposed acronym?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

It's a false acronym – it's USFDA Data Element Advisory.

Ken Kawamoto – University of Utah Health – Member

And, is that pretty set? Can we suggest a change to the name of that thing?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

No, we made it up. You can call it anything you want.

Christina Caraballo – Audacious Inquiry – Co-Chair

On a different slide that we have to work with.

Ken Kawamoto – University of Utah Health – Member

I just propose it be something that is not yet another acronym that we have to think about. I don't know what the best one is, but when I see "UDA," it doesn't say to me, "Oh, yes, the USCDI proposed data element."

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

How about "Data Element Advisory"?

Ken Kawamoto – University of Utah Health – Member

I think we would think it was the Drug Enforcement Agency.

Christina Caraballo – Audacious Inquiry – Co-Chair

Without getting stuck on the acronyms, it's asking if it exists and if it has been submitted. Does it exist in Comment? Is there a data class or data element in Comment? So, ignoring our advisory, it's more identifying and forcing a user to look at what's already been proposed in order to see if it exists, as opposed to just –

Ken Kawamoto – University of Utah Health – Member

I would suggest that the form be smart enough to do a search, kind of like when you go to a help site for your cable company, phone company, or whatever, and start saying, "I want to know...", and then it's like, "Do you mean this? In that case, you don't need to call us." It seems like it would be a reasonable thing to do at the infrastructure level.

Christina Caraballo – Audacious Inquiry – Co-Chair

I think there's a place – and, if it goes into the ISA, that is searchable for a data class or data element, but I think that's a good thing to note, so I just added that, Ken. I see Clem has had his hand up for a little while. Clem, do you want to chime in on something? Clem also typed. Clem's audio might not be working.

Adam Wong – Office of the National Coordinator for Health Information Technology – Back up/Support

His audio is not connected.

Christina Caraballo – Audacious Inquiry – Co-Chair

Clem wrote, "I think data element may be too small of a unit for submission. It would be extremely rare that a single element (singular) would be proposed. More likely" – I don't know that word – "spirometry measures of a class or some survey instrument." Clem, we have not muted you.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Right. Clem, I think that's a good point, and you're absolutely right, it's going to be rare that a single data element gets proposed, but I believe that was the fundamental unit of submission that ONC indicated, and Adam, Al, and Brett, please correct me if that's something different. But, I think in the real world, it's probably never going to get used.

Al Taylor – Office of the National Coordinator for Health Information Technology – Staff Lead

This is AI. I do think that's the unit, but whether there's going to be a submission that's going to be a single data element or a group of elements could go either way. The spirometry results – the spirometry test could be one data element, with all of the components being additional data elements, but that could be part of a class of observations of some sort, whether it's a procedure or lab result, depending on how you categorize it. A spirometry test panel, if you will, with all the different components would probably just be a list of data elements that would obviously be related.

Ken Kawamoto – University of Utah Health – Member

Maybe the task here is to have some of those common examples, and to make sure that the approach supports it, and to say, for example, if you want to do spirometry, this is how you would fill out this form, and make sure it's not mind-numbing, where you're like, "I can't believe the form is set up so that I have to do it this way." That would be useful with those examples. And, like Clem says, every question in a questionnaire – an example everyone probably knows is the APCOR score, right? How would you submit an APCOR score or a stop-in questionnaire? It should hopefully be in a way that doesn't make you want to tear your hair out.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Right. Those are important comments, and I guess it gets to what the structure of this process is going to be. What is this built around or built into? Those are probably issues that ONC is going to sort out over the next six months. They're really important. I'm not sure what kind of advice our task force can give them. Clem's got another comment, that the submitters ought to be pushed to review what's already in whatever we're calling this because the programs won't be smart enough, and that's probably correct. Is everyone comfortable with just making that a requirement for a submitter, that they look through what's already been submitted, find things that are similar or identical, and either pile into that submission or justify why theirs is different?

Sheryl Turney – Anthem Blue Cross Blue Shield – Member

That seems reasonable to me.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Sorry, Christina.

Christina Caraballo – Audacious Inquiry – Co-Chair

That's okay. Do you want to take the next section?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Sure. Let's go to that. Section 2. This is the identification of the data element. And then, these are questions about why we should even consider this data element. The first question asks for an explanation why it should be captured and available, and then we ask for a representative use case. That's really the extent of the justification for the data element. Should we require more, or is it just a fact of "Here's how it's being used and here's why it's important"? Okay?

Hearing nothing, we go to section 3. This is where the submission form matches the promotion criteria and moves toward technical specification and how the data element is being used. Again, to Clem's

point, “data element” here is a proxy for any submission, whether it’s one or a thousand. Do we ask them to offer examples of where it’s currently being captured electronically in an electronic system, and then tell us – and, we’ll change the language here to match how we change the promotion criteria – and tell us how it’s being captured, whether it’s encoded or pre-text? And then, we ask if a content standard exists for this data element, and if so, we ask them to point us to it. So, this is the first step down in technical specifications and use. Should we move on to the next one? Now, we’re continuing.

Type of use and technical specification – so, we’re asking if an implementation guide exists that contains this data element, and if so, to tell us. And then, we ask if there has been any testing pilot production, and if so, to tell us. And then, we ask if it has been successfully exchanged between two or more different platforms in a production environment, and if yes, to tell us. And then, the same question for four or more different platforms in a production environment. Those are the technical specifications that get you through Levels 1 and 2 to be considered for USCDI. I think that’s our last one on the submission form. Is that right? Do we have one more? Oh, that’s right. I’m sorry. So, these are the final questions to get by the HITAC and ONC. Tell us about the impact. We’ll cross out “provide supporting data.” Just make an estimate. So, it says “Is there evidence for the impact of this data element on healthcare costs?” We might just say “Please provide your estimate” to make it very personal.

Ken Kawamoto – University of Utah Health – Member

I wonder...when we judge or review these things – I think this is good the way it is. I’m just thinking of how we’re going to make decisions between them. Let me provide some examples. Let’s say one of the data elements is the spirometry results, and one of them is echo results, and one of them is detailed smoking history. Isn’t it going to be really hard for us, even if it’s been demonstrated that it can be exchanged? For example, “Judge the relative merits” – I don’t know. I’m just thinking of how we’re going to actually do this work once it gets proposed. Is there anything we can do in the submission process that helps that?

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

I’m not sure that we’re necessarily going to be comparing one data element to another to determine who gets the final slot rather than just determining whether or not there’s enough evidence for the cases you cited earlier of the four practices exchanging one thing that was good for the four of them only. That one wouldn’t pass muster. It’s not going to have any impact, and we would say –

Ken Kawamoto – University of Utah Health – Member

I assume we don’t want to put it, but is it possible we could potentially come up with requests for estimates that – well, I’ll give an example of what I think is unfeasible to ask, but would make our job easier. For example, for the benefit, “Can you provide estimates of benefit in terms of quality-adjusted life years saved?” In health services research, that’s a pretty common way to say generally, as a society, we believe anything between under \$50,000.00 for quality-adjusted life years saved makes sense, so we’ll pay for it in terms of healthcare reimbursement. I don’t think a bar like that is reasonable, but it sure would make our life easier if we could be like, “Oh, this one has an index cost of 1.5 and a quality-adjusted life years saved estimate of this, and this other one has that.” That’s not to

say that I think we can do it, but is there a surrogate or some other way that we can get at it? I can't think of one, but anyway, I'm just thinking this is going to be hard.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Ken, maybe the approach is just to waffle and say, "Provide your best estimate or evidence."

Ken Kawamoto – University of Utah Health – Member

"Provide your best case," right? Maybe, in some cases, the case will be – of course, you want to know how much it costs when you prescribe medications or get medications, and your best case is that everyone realizes through their personal experience that that's really important. In other cases, it might be saying that lung cancer – we could reduce lung cancer deaths by 10,000 people. That's more than breast cancer screening. That's a completely different kind of case to make, but anyway... It will be hard. It will essentially be a judgment call, which I think is fine, but it will be hard.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

What we'll do is change the language so that we make it clear that it's their best estimate – again, asking them to make the best case they can with whatever data they have, and it might be a guess from their Aunt Tilly, but if that's the best it is, then that's what it is. And, to Rob McClure's point earlier, there's not a lot of data out there that helps us on the data element level. So, with those changes, is that okay on the potential impact piece, just to ask for the best estimate? And then, the next section is potential barriers. Are there any restrictions on the standardization, and if they're known, then are there any restrictions on the use of the data element, like licensing or user fees? Finally, we ask them to provide an overall estimate of the burden to implement.

Steven Lane – Sutter Health – Member

Terry, when you talk about restrictions on the use, I've been involved in a number of conversations lately talking about payer/provider exchange, where data is being exchanged for a particular use. I'm just thinking about whether that fits in here. I guess it does. It's not a restriction related to the element itself, though – it's the specific use case. So, it may not be relevant, but when you said "restrictions on use," it made me think of that.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Right. I think the example would be a widely used, proprietary code set that requires your subscription to send and receive.

Steven Lane – Sutter Health – Member

Yeah. I think the way you have it is good.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Okay. Well, I think that's the submission form. Can you go one more slide, just to make sure? Good, okay. Wonderful. So, there are the promotion criteria lined up with the submission form, and again, we'll make sure they're cleaned up and synced up so that what we're asking the submitter to submit is what ONC is going to use to help determine the proper level, and that's the point of those two things. Are there any general comments, concerns, or questions?

Christina Caraballo – Audacious Inquiry – Co-Chair

Great. I think we can skip to slide 21, then. Terry, did you want to go over – I was thinking the next one we had in there was this one, the summary of the proposed role relationship of the submitters and communities of interest in ONC.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

Right, and we should – we’ll modify this based on Clem’s earlier comment about pushing the submitter to do things. So, this is just a list of functions and responsibilities that the submitter has and that ONC has in this promotion model. Steven, I’ll read them for you, and then there’s... So, anyway, the submitter has got to follow the application process. That’s their deal, and we’ll make sure that that includes reviewing what’s already been submitted to make sure they’re not duplicating. ONC is then required to review the applications and make leveling decisions based on the applications. And then, there probably has to be a process in there – a feedback loop – where ONC says, “Your application is incomplete, we need further information,” and has to reach out to the submitter, and then, obviously, the submitter has a requirement to respond. We didn’t talk about what happens when – anyway, we may be getting too detailed.

And then, the next one is sort of a general issue of how the community at large can best use the information that’s being sent in to ONC as part of the submission process, how best to display that, how best to make it useful so that communities of interest can form, so that people with similar data elements can help work to refine them, and create a broader consensus. Where does all this work get done? Obviously, ONC has the responsibility of building that. I’m not quite sure what it’s going to look like. Any thoughts on that?

Clem McDonald – National Library of Medicine – Member

This is Clem. I finally figured out how to talk. Specifically on that, I just realized that when it gets approved, does that mean the data has to be entered by all the clinicians in the world, or will the systems provide the machinery to send it if it is in the computer?

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

That’s a good question.

Clem McDonald – National Library of Medicine – Member

If it says it has to be recorded, there’s the opportunity for the entire world to stop the machinery, sort of like you can do with the internet, by asking for so darn many things. I think we should be clear on what the requirement is. Does it get back to physicians typing more?

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

Fortunately, we’re pretty far downstream from that. I think we need to have a process to advance data elements that have intrinsic value and technical specificity. How they get done is a whole different question – a good question, but a different one.

Clem McDonald – National Library of Medicine – Member

I wasn't asking how. I was asking whose obligation it is to see that that data flows. Is it really not anybody's obligation to create that data? Is this an obligation for the systems to be able to send it?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

I think it's the latter, Clem. I think it's the obligation of the systems.

Sasha TerMaat – Epic – Member

I think we asked about it in a previous call, and it was going to fuel a certification expectation, that certified products would support USCDI, and so, that would be a software expectation, not an obligation to record the information if it's not pertinent.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Thank you, Sasha.

Sasha TerMaat – Epic – Member

But, I agree that it's a really important distinction.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

We'll park that, and if it's not already in there, we'll park it in our issues for further discussion and future consideration, and hopefully, we'll get to some of those today. We're moving along pretty well. Any thoughts on – so, we put in "proving ground," just because the ISA has one. Do you know what we're thinking?

Christina Caraballo – Audacious Inquiry – Co-Chair

We're thinking of something similar to the interoperability proving grounds, but it's a place where people can come in, and the things that are high-impact data elements that may not have as much technical information because the submitter may just not know that – they can start forming communities to be able to work together and fill in gaps in information, and people of interest can start to come together, so that's kind of the idea behind the "proving ground" concept – a platform for collaboration, whatever that looks like. It's something that builds. Everybody can work together to put in information as they find it, and that fits bullet 3, where ONC can add it if they have the information, but the public can as well. So, it's not just the submitter that has to own this. It becomes more of a larger community effort.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

That sounds like a great idea, Christina. Everyone's in agreement. We obviously weren't quite clear on how to articulate this, so we're going to use "proving ground" as a shorthand, and we'll probably have to explain it again during our presentation. Moving on down to once we've built the proving ground, and then the submitters get to establish communities, and then, there's the idea that ONC has oversight of data element progress in the proving ground. Remember, in this process, there were three cycles, and if you don't advance, you get parked somewhere else. That really implies that ONC is tracking the progress.

Once they're tracking the progress, what are the possible results of them tracking? They could do nothing and say it's moving along, they could note that it's not making progress and put them on notice, or note that they're not making progress and help assemble the community of interest, or provide incentives or staff to move it forward if it's really valuable. It's just not clear whether ONC has another role to play in this whole process, and that's sort of the oversight of the proving ground and making sure the data elements are moving, and if not, providing assistance if it's of high value. There are a lot of concepts in that simple idea, which is why it's probably not that clear. Do we think that's a reasonable role for ONC to assume – the oversight of the progress?

Al Taylor – Office of the National Coordinator for Health Information Technology – Staff Lead

Terry, this is Al. For ONC's benefit, it might be good to either distinguish or not distinguish between this management of a proving ground and management of a list that includes the levels and all of the data of each submission within those levels, if that makes sense. If you're asking for an additional activity rather than the equivalent of what's in the interoperability standards [inaudible] [01:04:51] presenting the metadata around each data element. If you're asking specifically for an additional activity as a recommendation, it might be good to be explicit about it. If that's not what you're talking about or asking, that's fine, but if you are, I think it should be explicit in the recommendation.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Okay. So, I guess the question to the task force is should we ask ONC explicitly to monitor – well, I think we already asked them, but ask them explicitly to assume oversight of the data element progress – so, not only setting up the proving ground, or whatever we're going to call it, but observing the progress of data elements through the process? Is that something we want to ask of ONC? Any thoughts?

Otherwise, the ayes have it, and we ask ONC to do that, and we'll clean up the language a little bit. And then, the next potential ask, which is unbundled from the previous one, is should we ask ONC to assume a role to assist or provide guidance to individuals or communities of interest when data elements don't progress as required? Is there a role for ONC to be a facilitator, in a sense, in addition to being a –

Ken Kawamoto – University of Utah Health – Member

This is Ken. I think this is important.

Christina Caraballo – Audacious Inquiry – Co-Chair

It almost seems like that would warrant a separate prioritization process or some sort of indicator. In some cases, the fact that an element doesn't promote itself is an indicator that it's not where we should be focusing our attention as an industry – if it's not receiving enough pilots, or something along those lines. But, in other cases, it might be really important and merit additional attention to get through the process. How would we expect ONC to determine where the process was working when something wasn't being promoted, and where the process was broken when something wasn't being promoted and they should intervene?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Yes. It's a very subtle difference, and in a sense, it also taps into the next line, which is whether ONC should identify data elements with national strategic importance – the quadruple aim – identify gaps,

identify those elements that are not advancing, and develop strategies to help. So, Sasha, that gets a little bit to your question of prioritization – who’s setting the priorities – and I think that’s one of the issues that’s in our “to be discussed” box, and that is to what extent does the market drive this process, and interest will come when the market is interested in it, and it will move on, versus – or, in addition to – having a strategic process that identifies what’s needed, and then helps promote that independently of the market? That’s a big question.

Ken Kawamoto – University of Utah Health – Member

This is Ken. Put another way, the question is what are things that might not happen if you just left it to the market that ONC may want to push forward? I think assuming that there are such things, that’s where it would be useful. If I were to give an example, it would be things that might be voiceless, like people who are disenfranchised, people who are marginalized in society, for example. They may not be the folks that health systems or vendors may not be focused on. It’s possible they are, but it’s possible they aren’t, and there might be something – that might be useful.

If you took another example, such as social determinants of health, part of the reason why people care about it in the industry, beyond altruism, is when you’re in pay-for-value environments, you need to figure out how to control costs, and patients’ social environments are important and predictive of things like readmissions and such, but you could probably make a case that perhaps even if that weren’t, for example, a financial priority for folks, it might be something we’d want to focus on anyway. I assume there may be things like that that come up.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

Maybe what we’ll do is rewrite these – I like the way you frame the question; hopefully, you get it right. We request that ONC prepare for the possibility that there are data elements like this, and to have a way of prioritizing them, and prepare to use the resources at their disposal to advance those with high priority.

Ken Kawamoto – University of Utah Health – Member

I think that makes sense.

Steven Lane – Sutter Health – Member

We really haven’t come up with a lot of good examples.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

This may all be hypothetical, and the market may just do a perfect job.

Ken Kawamoto – University of Utah Health – Member

I would say beyond market failure, there’s the notion that when it comes to standards, there’s a very big – you can gain almost all the benefit from a standard by not being the one actively working on it, but just waiting for someone else to get the standards right, than just by using it. Even if it makes sense, it might be the kind of thing – it makes most sense if your competitors come up with the standards and figure it out, and then you just skip the discovery and research part. There are all sorts

of places where an organization which has a truly national scope of interest makes all sorts of sense to catalyze things.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

So, we've gotten the hi sign. We have three more minutes to public comment. The last two roles are pretty clear – adjudicate leveling and advancement decisions – obviously, there will have to be a process around communicating those and responding to comments – and then, finally, ONC obviously has the oversight role of the entire process, and essentially, to continuously improve it as well as maintain it. I think that's the end of that slide. That was our detailed discussion group of questions. Those were the key things we wanted to get done today, so we've gotten those. Should we break for public comment and take those, and then come back and take a look at the overarching goals of the USCDI promotion model, which is slide 7?

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

That sounds good, Terry. Operator, can we open the public lines?

Operator

If you would like to make a public comment, please press *1 on your telephone keypad. A confirmation tone will indicate your line is in the queue. You may press *2 if you would like to remove your comment from the queue. For participants using speaker equipment, it may be necessary to pick up your handset before pressing *.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Let me ask really quickly – have any other task force members joined since the top of the call? I know we had Sasha come in a couple of minutes late. Okay.

Clem McDonald – National Library of Medicine – Member

I did, too – Clem McDonald.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Yup, sorry. We've got you, Clem. I think that's it. Operator, are there any comments in the queue?

Operator

There are no comments in the queue.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Okay. Terry and Christina, I'll let you know if we get any additional comments over the phone.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Okay, that's great. Can we go on to slide 7? Again, Steven, sorry you're without a screen.

Steven Lane – Sutter Health – Member

I'll do my best.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

I will read this for you. This is the summary of our many discussions. I tried to pull out the issues that seem to guide the recommendations that we're making. One is that the process is open and public in transmission, and that it encourages a diverse group of stakeholders and communities to promote new data elements. So, it's really easy to get in and it establishes the fewest possible barriers for data element submission. The flip side of that is to establish a high bar of technical specification and testing for promotion – easy to get in, hard to get out – and then, establish clear requirements for promotion that help submitters plan appropriately. That's hopefully what we did with the submission form.

And, to establish clear requirements for promotion, enabling ONC to appropriately place elements in classes. And then, one of the ultimate advantages of this process is the advance notice that it gives to industry of what is coming down the pike and has a high probability of being a requirement in several years. Those were the goals that we pulled out of our discussion. I'm happy to rewrite them, add to them, or subtract from them. Otherwise, we'll use this slide in the HITAC presentation. Okay, that's great. Christina, next on our list was slide 6, which was a brief summary of what we've done as a task force. Do you want to do that one, or shall I?

Christina Caraballo – Audacious Inquiry – Co-Chair

Sure. So, a brief summary of what we've done so far – we reviewed the promotion model, we really felt that it looked great, but what we wanted to do was look at the additional details. So, the proposed model addressed a lot of our 2018 task force recommendations, but with a simpler structure. Sorry, I forgot Steven was listening – that's our first bullet. And then, what we did next was added detail to the advancement process and made recommendations for the specific criteria between levels, the application process and submission form, and then, our proposed concept of creating a user guide for submitting data elements.

The next bullet is that we've added details for a USCDI data element advisory process, similar to the ISA. So, for this one, it is a model by which the ONC will coordinate identification, assessment, advancement, and public awareness of data elements proposed for USCDI, and then, we have discussed additional issues, including a process to advance strategically important data elements. So, that is a brief summary of what we've discussed, and I'm hoping to use this in the HITAC discussion, so if anybody has any comments on this – Ken, earlier, you mentioned our name of this USCDI data element advisory process, that there's something better we should be calling it.

Ken Kawamoto – University of Utah Health – Member

I was just wondering if it was the proposed USCDI data elements or something – maybe call it “proposed USCDI data elements,” or if it was an acronym, it might be “USCDI-D” – I don't know, but I figure we have enough acronyms and names running around that we might want to just call it what it is.

Christina Caraballo – Audacious Inquiry – Co-Chair

“USCDI data element process.”

Ken Kawamoto – University of Utah Health – Member

I think the process is fine. I got confused by the reference to proposed data elements as “UDA,” and I figured we should just call them “proposed USCDI data elements” or something.

Christina Caraballo – Audacious Inquiry – Co-Chair

Well, I confused myself, so that makes sense. I think this is less getting hung up on the name and more just the concept and the role.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

We can also give naming rights to ONC, and they can call it whatever they like. So, we’ve got five minutes to go. Lauren, are we still okay with public comments?

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

I believe so. I don’t think we have any comments. Operator or Katie, any comments?

Operator

There are no comments at this time.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Okay, thanks.

Terrence O’Malley – Massachusetts General Hospital – Co-Chair

Let’s turn to the – and, in case we don’t get through it, which we won’t – for homework for next week, if you all could just take a look at these issues for further comment and discussion and provide any comments that you’d like – these are slides 23 to 25. Again, they’re not in any particular order. These were culled from the previous discussions, and we’ve talked about some of them today, so, Steven, for your benefit, a process to identify high-priority data elements that are not advancing – we discussed that. A process to encourage work on high-priority data elements, a need for champions to move data elements through the process, and a question of ONC’s role to convene support and provide use for resources. Those are all somewhat related. That gets back to Sasha’s comment about a prioritization process and mobilizing resources.

And then, there was another concept of the sandbox, somewhat like the ISA standards sandbox, and doing the same thing for leading USCDI data elements as a place where industry can help build consensus around what the data class should look like and have a place where they can test it. That’s the fourth. We can just go through – next slide, please. This one says – again, we’ve talked about some of this – a potential role for the interoperability proving ground as a model for how the USCDI advancement process could perform. To Ken’s point, it should be open, public, and searchable, and

whether or not it's smart enough to do smart searches. What role should ONC take in the process in addition to setting it up and maintaining it? That gets to the support for advancement work.

Clem McDonald – National Library of Medicine – Member

Terry, this is Clem. Is there a possibility of talking about the difference between data that's sitting in electronic systems now and that being sent versus ones that require new data entry?

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Interesting. Okay, data in systems versus new entry.

Clem McDonald – National Library of Medicine – Member

There's still a lot of it.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

The last one on this slide – how do “bulk” data classes, such as lab test results, get handled? Is there a numerical limit to the number of data elements that can advance at a time? Again, that's one of our old questions. Would ONC ever say, “As of three years from now, you've got to be able to send every lab test known to man that's in this current standard?” Would that ever happen?

Clem McDonald – National Library of Medicine – Member

I think they've already said that. I think the horse is out of the barn.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

By agreeing to the data – well, did they agree to the data classes, to the note classes – note types?

Clem McDonald – National Library of Medicine – Member

We hope so.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

If they agreed to a lab note type, does that mean that all labs now have to be done...?

Clem McDonald – National Library of Medicine – Member

Well, the lab note type is really a bizarre kind of lab we don't want to encourage, but there is already a specification that regular labs be sent as structured results. I think that's a done deal.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

All right, so maybe this question is already asked and answered.

Clem McDonald – National Library of Medicine – Member

Well, you used it as an example, and I think the question is still valid. I don't know what high-volume things are still working, but there may be some other classes that have a lot of stuff like labs.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Okay. So, these were our questions. Actually, we've got one more slide of questions. Can you bring one more slide up? This gets back to prioritization of data elements. Is there a process to identify high-priority data elements that are not advancing and encourage work on them? Is there a need for a champion to move data elements through the process? As Ken noted, that's an expensive proposition. Anyway, this is just to give you a taste of what the questions are. So, we'll leave it for any comments you all would like to make. We might include some of these in our presentation, but thank you all. We do not need a meeting next week, which none of us could go to anyway. We got everything done we have to do.

Steven Lane – Sutter Health – Member

Hallelujah.

Terrence O'Malley – Massachusetts General Hospital – Co-Chair

Amen, and great work – a tremendous amount of work from everyone. Much appreciated. Christina and I will pull together a proposed final draft and get it out to you guys as soon as we can next week, and then get it to ONC by whatever deadline they need from us to have it in for the HITAC. Thank you again, everybody.

Lauren Richie – Office of the National Coordinator for Health Information Technology – Designated Federal Officer

Thank you, everyone. Take care.

Christina Caraballo – Audacious Inquiry – Co-Chair

Thank you, everyone. Bye.