

# Transcript

## HEALTH INFORMATION TECHNOLOGY ADVISORY COMMITTEE (HITAC) EHR REPORTING PROGRAM TASK FORCE 2021 MEETING

August 19, 2021, 10:00 a.m. – 11:30 a.m. ET

VIRTUAL



# Speakers

Name	Organization	Role
<b>Raj Ratwani</b>	<b>MedStar Health</b>	<b>Co-Chair</b>
<b>Jill Shuemaker</b>	<b>American Board of Family Medicine's Center for Professionalism &amp; Value in Health Care</b>	<b>Co-Chair</b>
Zahid Butt	Medisolv Inc	Member
Jim Jirjis	HCA Healthcare	Member
Bryant Thomas Karras	Washington State Department of Health	Member
Joseph Kunisch	Harris Health System	Member
Steven Lane	Sutter Health	Member
Kenneth Mandl	Boston Children's Hospital	Member
Abby Sears	OCHIN	Member
Sasha TerMaat	Epic	Member
Sheryl Turney	Anthem, Inc.	Member
Steven Waldren	American Academy of Family Physicians	Member
Michael Berry	Office of the National Coordinator for Health Information Technology	Designated Federal Officer
Seth Pazinski	Office of the National Coordinator for Health Information Technology	Director, Strategic Planning & Coordination Division
Cassandra Hadley	Office of the National Coordinator for Health Information Technology	ONC Staff
Michael Wittie	Office of the National Coordinator for Health Information Technology	ONC Staff Co-Lead
Dustin Charles	Office of the National Coordinator for Health Information Technology	ONC Staff Co-Lead
Fredric Blavin	Urban Institute	ONC Contractor
Kathy Frye	HealthTech Solutions	ONC Contractor
Gary Ozanich	HealthTech Solutions	ONC Contractor
Christal Ramos	Urban Institute	ONC Contractor
Laura Smith	Urban Institute	ONC Contractor





## Call to Order/Roll Call (00:00:00)

### **Operator**

All lines are now bridged.

### **Mike Berry**

Thank you very much. And good morning, everyone. And welcome to the EHR reporting program task force. I'm Mike Berry. I'm with ONC. And I'm really excited to have everybody here with us today. We have a packed agenda. So, I'm going to jump right in with roll call. And I'll start with our co-chairs. Raj Ratwani.

### **Raj Ratwani**

Good morning.

### **Mike Berry**

Jill Shuemaker.

### **Jill Shuemaker**

Present.

### **Mike Berry**

Zahid Butt. Jim Jirjis. Bryant Karras.

### **Bryant Thomas Karras**

I'm here.

### **Mike Berry**

Joe Kunisch is not going to be with us today but he should be back next week. Steven Lane.

### **Steven Lane**

Good morning.

### **Mike Berry**

Ken Mandl.

### **Kenneth Mandl**

I'm here.

### **Mike Berry**

Abby Sears.

### **Abby Sears**

I'm here. Thanks.

### **Mike Berry**

Sasha TerMaat.





**Sasha TerMaat**

Good morning.

**Mike Berry**

Sheryl Turney.

**Sheryl Turney**

Good morning.

**Mike Berry**

And Steven Waldren.

**Steven Waldren**

Good morning.

**Mike Berry**

Good morning to all.

**Jim Jirjis**

Jim Jirjis is here.

**Mike Berry**

Good morning, Jim. Got you. I'll turn it over to Raj and Jill to kick us off.

**Opening Remarks (00:01:16)**

**Jill Shuemaker**

Thanks, Mike. And welcome, everyone. We're so glad that you're here. Again, thank you for your time that you've dedicated to help us improve these measures. We are just going to go ahead and skip to Slide 9. What we're passing is just the meeting process, agenda, etc. And we have so much to cover. I'm going to go ahead and turn it over to Zahid and Sasha if you're ready to talk about the preliminary recommendations for standard adoption and conformance measures. Zahid and Sasha.

**Preliminary Recommendations for Data Quality Potential Future Measure (00:01:59)**

**Sasha TerMaat**

Hi. This is Sasha. I think we could look at the data quality and completeness section of the report.

**Jill Shuemaker**

Okay. Can we pull that up?

**Sasha TerMaat**

Let me see if I can find the page number. Here we go. So, right now, all of the recommendations from last week's discussion are under For Further Discussion. And I think our goal is, if we have consensus, to move it up to Agreed Upon. I, actually, think we had consensus on a Friday of these. Just to frame this, all of





these were part of the measures for future consideration. But we did want to discuss them given the importance. The first recommendation, I guess, is that this is, actually, not one measure but a bunch of measures and that we would need to, specifically, define and prioritize each individual data element where we wanted to assess the data completeness. Some of them, I think, were straight forward enough. Others would need further definition. But it is not something that can be discussed all at once. We'd need to consider each one individually. Related to that recommendation that we would consider each data element individually in terms of specification and prioritization, a few sub recommendations.

Actually, I don't know if this first one is related. It was more of just an observation. Obviously, if there is a required field then, you might have very high data completeness but that doesn't, actually, mean much about data quality. There was a sense, in our discussion, that the mother's maiden name would not be the one that we would prioritize. But there were three suggestions to add for consideration to the list that was in the draft preferred language, phone number, and email. Any objections to moving this first bullet and its sub components up to the agreed upon section?

**Raj Ratwani**

No objections from me. This is Raj.

**Sasha TerMaat**

All right. I'm moving it. We'll keep going. As we would prioritize each of those particular data elements either one of the ones that were in the draft or the additional ones we recommended, the goal was go consider the usefulness of measuring that in the prioritization. Not all of them seemed as useful as others. And the themes of what would help us prioritize were equity and patient matching. Any objections to that?

**Raj Ratwani**

This is Raj. Also no objections from my side. And sorry, Sasha, just really quickly to clarify to folks, it looks like we jumped in the agenda a little bit. And if people have the agenda up, we were going to start with Ken and Jim at 10:10. So, let's just keep going with this. And Sasha, you're into this. But we will keep it to 15 minutes as planned so that we can make sure we leave plenty of time for Ken and Jim to continue from where they left off.

**Sasha TerMaat**

Perfect. I'll try to take us through the rest of these recommendations quickly and then, we can turn it over to them.

**Raj Ratwani**

Thanks.

**Sasha TerMaat**

The third area I'm hoping we have consensus is if we're measuring the percent of particular data element as populated, we don't need a look back window. We would choose the simplest option, which would be to just check at the time the data is collected, which would be presumably after a particular reporting period is over. Any concerns there?

**Steven Lane**





I think that's consistent with what we've done with other measures.

**Sasha TerMaat**

Yeah. And I think the complexity tokens for other things. This next one is really more of an observation than it is a recommendation. I don't know if we want to preserve it just for the record or we want to cut it because it's not really recommending anything. But it says that when we interpret this data, we'll have to understand a little bit about the different nature of the way it's collected to have meaning in the interpretation. If data is collected at an encounter level rather than a patient level that might add complexity for certain systems. In other cases, if there is something that's required to create a patient record then, we'll see, as we observed above, higher completion rates but not necessarily meaningful. And the same, I think, around the use of any default values. I don't think these are contentious observations but they're also not really recommendations. So, I'm fine with cutting it or keeping it. Whatever folks think is the most applicable.

**Raj Ratwani**

Maybe at this stage what we can do is label those as other considerations or something like that. And we can see how we might fit that into the report. Does that work for everybody?

**Steven Waldren**

Yeah. This is Steve Waldren. I was going to say it's almost kind of like a preamble to the recommendations. I think it's important because we all know that completeness is important. But just because something is required, as an example, doesn't mean that it's going to be of real value. So, I think this stuff is important but I think it's a preamble.

**Bryant Thomas Karras**

Yeah. This is Bryant. I think we, as an industry, need to come up with another term other than required and optional. Anything that's made optional is likely to not be entered into in an emergency or when things are moving fast. So, we need some kind of indicator that quickly trained individuals or healthcare providers can understand the importance of the upstream use of a particular element for patient matching, for example.

**Sasha TerMaat**

I don't disagree, although I'm not sure that this measurement is going to help us achieve that goal.

**Bryant Thomas Karras**

But I think if there is some indication in the metric of why we're examining it, it could telegraph to developers and telegraph to implementers how to successfully improve a given metric. Staying silent leads to too much misinterpretation in my mind.

**Sasha TerMaat**

And I think I'm struggling because in some cases, some of the data elements we're talking about, I don't know that we're going to expect the same levels of population or data completeness as others. And so, I think there will be an interpretive consideration around what does it mean. What would be the goal? When is it appropriate to skip populating and when is it not? But I think those are larger policy conversations for sure. Maybe we want to put a comment down here on other thoughts on data interpretation. Back to the recommendations here, I think the next one is just that there was a suggestion that this be sub grouped by client and reported by quintiles. We felt like that wasn't clear for what developers would program or report.





And it should be clarified or removed. I think some of the Urban Institute folks offered a bit of clarification. But if that's preserved in a final recommendation, it would, certainly, need some detail. Any objections to moving that up?

**Jill Shuemaker**

I think we can move it up.

**Sasha TerMaat**

The next one is more of an observation. There was a question about patients with multiple records in different systems. And aggregation would not be practical to deduplicate those. I think we were all on the same page about this. I would maybe say this one goes down into our new category of remember when we interpret the data, it's not really a recommendation. And the final one is also not really a recommendation. It is kind of a clarification. The category is called Data Quality and Completeness. But all of the proposed measures that we were discussing here are really just about completeness. I don't know that there is a recommendation beyond that. Just kind of a note. I will remove it here. Bryant, do you want to try to add down in the data interpretation considerations a bullet to your point about educating on the importance?

**Bryant Thomas Karras**

Yeah. I'll try to work on something. And I've had this discussion with HL7 that there is a way that implementation guides themselves can have a term used so that data elements that are of utmost importance but we understand you can't make it required because not everybody has a phone number but 99% of people do. And I just got a COVID test this weekend and the person didn't ask for my phone number because he said, "It says it's optional here so I didn't ask you."

**Sasha TerMaat**

Yeah. It's a really tough challenge. I know there is a balance. And Steve Waldren probably hears about this a lot. If you require capture then, you run into problems for the tiny fraction of patients who don't have that information. And then, people just put in bogus information. And so, it, actually, has consequences on data quality because to get past the field, people just enter nothing. And so, how do we make it more clear?

**Bryant Thomas Karras**

I feel like we need that gray area between optional, required if present, and required that helps with interpretation. Are you sure you want to leave this empty but not force people to put in fake data? An online phone number is not useful. So, I totally understand and agree. If this recommendation is about improving data quality then, we need to try to figure out how the measurement itself can help to improve data quality.

**Sasha TerMaat**

I think there is probably a whole project on what are the most effective ways to increase data quality that's separate from is this looking at completeness an effective way to measure data quality. I say that partly because I have some reservations about how effective we'll find just looking at data completeness in really assessing data quality. But given that the scope here are these metrics, I think this captures some of what we've talked about here. There could be a whole separate initiative that looks at policies around data capture, education, best practices. And that might inform measurement also if we had a different best practice.





**Jill Shuemaker**

Sasha, I think those are good points to add there. I think those are recommendations that we can add and present to the HITAC group of what's needed for the future. So, I think that's a good point to add.

**Sasha TerMaat**

Sure. If other industry initiatives come up with best practices in the future, we might want to revisit this category with new measure proposals.

**Jill Shuemaker**

Right. Exactly.

**Sasha TerMaat**

I'll add that in here. If future industry efforts develop new best practices around data completeness and quality, revisit these measures. I think that brings me to the conclusion here. Bryant, if you put another data interpretation bullet in there, I'll take a look. And then, we can turn it over to Ken and Jim.

**Jill Shuemaker**

Awesome. Thank you, Sasha, for being so quick on that. And apologies, again. I pulled you guys in for the standards and adoption. So, apologies, Ken and Jim. And I'm going to turn it over to you guys and Raj. Thanks.

**Raj Ratwani**

Wonderful. Thanks, Sasha and thanks, Jill. I appreciate it. Ken and Jim, the floor is yours. I know we have a lot to cover and we had to rush through things a bit at the last meeting. So, we've tried to allocate a fair amount of time here, at least 25 minutes and, hopefully, a little bit more. And then, following this, we'll jump back to the agenda and go into the clinical care measures with Steve and Abby. So, Ken and Jim, please go ahead.

**Preliminary Recommendations for Standards Adoption and Conformance Measures  
(00:16:50)**

**Kenneth Mandl**

Thank you, Raj. We have here in the document almost precisely what we presented last week. However, there are two small changes that I'll highlight when we get to them. One small change and one significant addition. The small change I'll highlight when we get to it. It relates to the listing of Smart on FHIR apps in various app galleries and other settings. The significant addition, which is based on some background data gathering from experts at ONC is to propose, in addition to the metrics shown so far, collection of data on the costs, actually, incurred for use of the API's, both the Smart on FHIR API and clinician facing applications and also the bulk data API. And the cost information that we're requesting will complement the existing requirement that's in the 21<sup>st</sup> Century Cures rule for transparent listing of API fees. So, this is sort of the real world evidence monitoring of those costs that can be held up against the published API charges that are already required under the rule.

So, let's see. Thank you for coming down to costs in the diagram. So, we can go back up to the top. And I will just also follow up on one, I think, clearly informed comment last week that the galleries are not,







specifically, specified in the regulation for certification. So, we had some internal conversations, including seeking advice from ONC. And because the galleries are a common method for listing applications and because we were told that it is okay to request that information, even though it's not part of the certification process, as long as the metric is clear and measurable by the electronic health record vendors. So, with that introduction, there are two areas that we could focus on. And I'll let Raj guide us on the direction for this conversation to be most productive. We can, certainly, go through each of these numerators and denominators. And we also have in our comments here over to the right some questions about how the ecosystem works and some of the measurements that there may be expertise on this Adobe Connect to answer.

But in any case, we think we should do some research to answer some of the questions that we put in there. So, we can begin focusing either on the questions or on the numerators or denominators. Raj, do you have a preference there?

**Raj Ratwani**

Yeah. Thank you, Ken. Why don't we see what task force members are thinking? I know some of this content was shared ahead of time. I'm unsure if people had time to look at it. I know everybody has got incredibly busy schedules, especially with Delta kicking up. So, let's just pause for a second at this stage. Are there any task force members that reviewed something and have questions for Ken or Jim? And if not, I would suggest maybe we can go through the numerators and denominators first and then, jump to the questions.

**Steven Lane**

Some people are entering stuff in the document in real time and I'm not seeing it showing up. So, whoever is displaying could just refresh their screen now and then so we can see comments show up.

**Raj Ratwani**

Perfect. Thanks, Steve. And Sasha, I see your hand up so please go ahead.

**Sasha TerMaat**

So, if we're reporting this bi-certified product and an app gallery is a totally separate thing from a certified product, is this really saying that you can't certify your product if you don't report information about unrelated business lines? I'm still trying to understand the distinction between a certification requirement and things that are completely unrelated to certification.

**Jim Jirjis**

It's Jim. To me, that would be a question for ONC because if the purpose is to do reporting to understand what's happening with people's ability to create apps that are FHIR based versus in an app gallery then, it would be important to have that information whether that means that that is require for certification would have to be something ONC would address.

**Sasha TerMaat**

Yeah. I think reporting total numbers of apps registered in the method required in certification seems reasonable. That's directly related to the G10 criterion. But having an app gallery is a value added service





likely unrelated to G10 certification at all. And I guess I'm kind of confused by Ken's comment that ONC said that was okay. How does that reflect on the certified product?

**Kenneth Mandl**

I agree with you that that question needs to be answered but we agree it's a value added. We're just saying is how the app economy is evolving and how are people building apps we believe is useful. And you're right. ONC would have to answer how they would approach that with your certification question.

**Sasha TerMaat**

Okay. I'll put it in the document for consideration.

**Raj Ratwani**

Any other questions about these materials before we ask Ken and Jim to run through the numerators and denominators here?

**Sasha TerMaat**

Is the EHI export one new? Or am I missing that in Urban Institute's draft?

**Kenneth Mandl**

It is new. It's not new from last week but it is new compared to the three areas that Urban Institute focused on. It's a fourth area that's clearly in the regulation maturing one year later as a requirement end of 2023. But it will occur by, potentially, quite different processes than the API standards. There may be overlap with the methods afforded by the API to get some of those data out. But the EHI export being all the data in the either patient's own electronic medical record or a hospital/provider's full electronic medical record across the full roster of their patients will be required to be exportable.

**Sasha TerMaat**

You're proposing, I guess, instead of the suggestions that are in Urban Institute's draft in Table 4 that instead, you would have the metrics that you have in the document here under EHI export metrics, vendor availability of apps, and health system cost of apps.

**Kenneth Mandl**

These two sections, vendor availability of apps and EHI export metrics and the costs are additional categories.

**Sasha TerMaat**

And by costs, do you mean fees charged?

**Kenneth Mandl**

That's a very good question worthy of discussion. I think the actual fees paid would be what I had in mind as evidence of the real world analogue to the published cost structures.

**Sasha TerMaat**

I'm ready to talk through the specifics. Thanks.





**Raj Ratwani**

Thanks, Sasha. And Jim, please go ahead.

**Kenneth Mandl**

Okay. I thought Sasha was going to start talking. I misunderstood. So, starting here with clinician facing apps, which will be a potentially very common use case, we are looking at, essentially, clinician facing end points where the FHIR API is exposed and apps can authenticate themselves using the smart authentication technology. So, we're proposing as numerators to get a sense for the use of these apps the total number of API calls. And, specifically, to understand how the ecosystem is being evolved. And this relates to both versions of FHIR and also resource types, which will be mappable back to the US Core Version 4 or data even applied to US Core. Right now as we know what is regulated is that US Core V1 be implemented. US Core V2 has already been published but there is no regulatory requirement. But we think in the ecosystem, the customer demand and also desire by the vendors to stay current with it may lead to, actually, a self-maturing system even beyond the regulation.

But it could be that ONC requires additional information like this to assess the value of acquiring advances in USCDI versions, for example. Second is, again, for these clinician facing endpoints total number of creates and updates. This is capturing what has been a source of strong customer requests and ecosystem requests, which is that data be written back into the electronic health record. For example, the result of a decision support algorithm. And we think there is an opportunity to capture write backs into the electronic medical record something not specifically called out in the regulations but something that may well track with the evolution and the advances in the US Core. And, again, by FHIR version and resource type for the write backs that are using those data types. Third is to get a sense not just of the numbers but also the total volume of the data transferred and the counts of FHIR resources transferred so that we can understand how much data are flowing in the system.

And then, to get at the level of apps to look at the count of the apps that have at least one launch. And then, the count of the number of Smart on FHIR app launches. This is an important adjunct to the first three criteria, we think, because without it, let's say Vendor X has one of its own Smart on FHIR apps and no third party apps. We wouldn't necessarily be able to judge that just based on the API calls and the write backs. You could have a non-market driven apps economy and still have very good stats to the first three. So, we think this is an important adjunct. And then, the other section we looked, specifically, at seeing whether we can, actually, glean what the lists of those apps are so that we can really have a qualitative understanding of the ecosystem as well. Are there any questions or comments or additional points by Jim that I might have left out before we go to the denominators?

**Raj Ratwani**

No, you covered it well, Ken. Jill, any comments from your perch? Go ahead.

**Kenneth Mandl**

Denominators. Trying to get a sense of who is using the apps and how we scope the meaning of these numerator metrics. Providers with at least one EHR session in the period so that's active providers. Patients with at least one EHR documented encounter in the period. That's active patients. Counts of EHR documented encounters and we would defer to this work group's definition of an encounter, which has been discussed. The EHR use. And then, also thinking about it per site recognizing that there are going to be





some nuances and potential ambiguities as to what constitutes a site. Would a large ACO with multiple hospitals be one site? Would a single EHR vendor instance across the full magnitude of HCA be one site or would each hospital within the HCA ecosystem be one site? So, there are, certainly, I think for this work group, perhaps metrics in other categories as well besides standards and adoption. Those definitions are going to be important.

Are there any comments or input before we move to the next section, which is the patient facing endpoints?

**Sasha TerMaat**

We've been putting comments into the Google Doc. Do we want to talk through them or do we want to get through everything and come back?

**Raj Ratwani**

I'm okay either way.

**Jim Jirjis**

How much time do we have?

**Kenneth Mandl**

Raj, we'll be guided by you.

**Raj Ratwani**

I think a few things. Steve Lane has left a couple of comments. 1.) Is a reminder just to refresh the doc. 2.) To collapse Katy Frey's comments so other comments can display. So, if we can do that that would be helpful. I would say let's run through some of these comments now. We do have a little bit of time here that we've allocated for this. So, I'd say let's run through some of these comments now and then, we can jump over to the additional questions.

**Kenneth Mandl**

So, I understand the addition of queries as sort of an explanation of what the API call is. But is it clarifying or is it redundant?

**Steven Lane**

I think it's clarifying just because you included write backs in there. And I think it makes it more clear to readers.

**Kenneth Mandl**

And these other ones are, I think, excellent wordsmithing and organization.

**Steven Lane**

Sasha had some more overarching comments.

**Sasha TerMaat**

I guess this is maybe the similar point to what I just made. But if you have a product that achieves certification to G10 and supports read US Core API's. And then, maybe you have other products like extra





FHIR that supports other FHIR resources, maybe other versions of FHIR, things that are outside of US Core, the program here is going to report on the certified product. This program, as I understand it, doesn't have a mechanism to collect data on products that aren't certified. So, I guess I'm kind of like if we're asking about things that are outside the scope of certification, FHIR resources that aren't in US Core or write APIs then, isn't the reporting going to be wonky because those products are pursuing certification and aren't going to be reporting?

**Kenneth Mandl**

Well, they could report zero.

**Steven Lane**

I think Sasha's point is that they wouldn't be required to report at all because they're not certified, right?

**Sasha TerMaat**

Right, yes. I don't want us to think that we're going to gather useful industry data on something that isn't required to report. So, we could ask a question like does a certified product do something outside the scope of certification. But the answer is not necessarily going to be useful for policy making because some products might do that but they don't pursue certification because that's not in certification. So, we'll be missing that data component.

**Steven Lane**

Except, Sasha, on the other hand, again, the whole purpose of this effort is so that purchasers can compare certified products. As a purchaser, I'd love to know that a certified product can do write backs and how often it does it in the real world, even though there may well be noncertified products that do that as well. So, I don't see it as harmful here. I think it's a good step in a direction we all want to go.

**Sasha TerMaat**

As long as we don't generalize the data collection to assume that that's all the activity that's out there. So, from a purchaser perspective, it might be useful to understand the scope of the certified product. From a policy perspective, it will not be comprehensive.

**Steven Lane**

That makes sense.

**Kenneth Mandl**

I think that is an important distinction that is going to be very important to operationalize at the time of interpretation of these results because you're absolutely right. We could be having some of this activity outside the certified product.

**Sasha TerMaat**

Yes. And that risk, I think, is inherent to writing measures that include capabilities beyond certification.

**Jim Jirjis**

It's Jim Jirjis. It seems like, again, kind of the same theme that if ONC's desire is to understand what's happening, they have to address that if this is limited to certified products then, they're going to have to





address what to do with valuable activity that occurs outside of it. And then, how meaningful are the metrics around certified when there may be a lion's share of activity outside of what is currently defined as the certified pool set. And that sounds like a higher level discussion. ONC may want to consider what falls under the scope of certification for interoperability.

**Kenneth Mandl**

I agree. So, let's think through, functionally, trying to advance an ecosystem. As I mentioned, USCDI 1 is what's regulated. But there is strong hope and aspiration among many of us that USCDI 2 and beyond will be implemented without necessarily an iron fist coming from a regulator. However, if it turns out that by 2024 FHIR version and resource type are all scoped at USCDI 1 and using USCDI 2 is an expensive bolt on to the certified product that would be, if I were a regulator, a signal that perhaps that the consensus process is not working. I think given the momentum, that's an unlikely result now but it would be worthwhile to know. That's the thinking.

**Sasha TerMaat**

And there is a little bit of nuance there, too, because USCDI Version 2 we anticipate will be available in certification as part of SVAP. And so, if as we anticipate, USCDI Version 2 is part of certification then, I think including it in these measures is very reasonable. But that's a little bit different than other types of standards, which are not even going to be available in SVAP.

**Kenneth Mandl**

And if we hope the metrics only to what's available by definition in certification then, the metrics are simply a minimum legal compliance with certification as a –

**Sasha TerMaat**

Would it make sense to put both the certification base plus anything that's available in SVAP into the scope?

**Kenneth Mandl**

That's a good question that I would need some help answering.

**Sasha TerMaat**

I would be more comfortable with that than having it be undefined.

**Kenneth Mandl**

Sasha, would you be able to send some pointers to the SVAP that we can review and we can get back on that?

**Sasha TerMaat**

That might, actually, be a question for ONC. Can someone from ONC send out some contextual material about SVAP for education?

**Jim Jirjis**

That's the Standards Version Advancement Process you're talking about?

**Sasha TerMaat**





Yes.

**Steven Lane**

It's well documented on the web. I'll go grab the URL and put it in the chat.

**Raj Ratwani**

Thanks, Steve. So, we have about five minutes left. We can run a few minutes over and trim some of the final comments. So, about five to seven minutes. Do we want to shift over to the set of questions and see if there are any comments from folks on the task force about those?

**Kenneth Mandl**

So, these questions are appearing in the comments on the right.

**Raj Ratwani**

Oh, sorry. Is that what you wanted, Ken, the Google Doc up with the comments there?

**Kenneth Mandl**

Yeah. Those comments are there. Exactly. So, these are questions about the ecosystem. I think it's very related to what we were just discussing with Sasha. Are vendors certifying their Core products or are the certifying bolt on products? In other words, is a provider attempting to meet their requirements for using certified IT, are they all of a sudden buying additional products? And I don't know which direction the vendors are moving. I know that Epic just released its first version of the bulk API in its Core product since we wrote this question. So, there is some directionality here. I'm not sure if Cerner is going to do the same thing. Are there any comments from the task force on that question?

**Sasha TerMaat**

This question is a little bit different than my point because in either case here, whether you certify the Core EHR or a FHIR module to G10, there is also the question of capabilities outside of G10 and how are those handled. And that was more the root of my concern about how this reporting would work than whether you certified to G10 as one module or as the EHR.

**Kenneth Mandl**

Great. When I said related, I was thinking in a more orthogonal fashion but thank you for clarifying. This question about can we require information on costs, I have confirmed that we can. Whether we choose to is up to the task force. The technical question, which I imagine could emerge during a public comment period and feedback from the vendors is whether some of the metrics that we proposed like accounts of different apps being launched, etc., whether they can see that now. I don't know to a vendor whether, for example, an API call from a patient facing app looks different than an API call from a clinician facing app. So, is there additional machinery that would need to be built into the products to automate some of these metrics. And, for example, can API calls between different apps or different types of apps be distinguished through metadata that's being transferred along with the queries?

**Sasha TerMaat**

Two comments here. I guess to answer your second question of what data is collected today, I know from conversations with the EHRA, the trade association of EHR developers that there is a wide variance in







terms of current data collection at the EHR developer level. And in some cases, this whole reporting program presents significant complexity for certain EHR developers in terms of whole new mechanisms to collect data from their clients, aggregate it, and report it as part of this program. And so, they're not looking at necessarily any granularity of data in that way today. And that's not new with this program. In other cases, there are certain mechanisms that are available and it might be a question of building additional data access rights or data use rights on top of an existing mechanism. But I do think sort of broadly, a lot of the recommendations from this section, they're large in number and some of them are quite complex. So, I do think it will be important to prioritize what of these menu of options is going to be most important for the initial set of data capture.

It doesn't seem feasible to me that all of the things that are proposed here in this draft are going to be practical to tackle right away.

**Kenneth Mandl**

Jim, do you have any comments? I'm just checking to see if Jim is still here.

**Jim Jirjis**

Yes, I'm here.

**Kenneth Mandl**

I'm just wondering in the idea of meetings that prioritize the recommendations because of the burden on EHR developers to **[inaudible] [00:51:09]**.

**Jim Jirjis**

Are you saying should part of the recommendations be modified and presented informed by burden and be phased in?

**Kenneth Mandl**

My impression is that we're looking at measures that would go into effect at the earliest in 2023. And perhaps more likely by the time this process has played out and the metrics are finalized, it may be more like 2024. The developers do have time to address these issues.

**Jim Jirjis**

As we've discussed, to me, it seems like at the core goal of this, why are we even doing this. My understanding is it's so ONC can understand this new market, if you will, of app development and be informed about further policy. And so, to me, it seems like it's 2024. Yes, we want some sense of the lift because some of the recommendations might be informed by that. Certainly, a Phase 1 of having ONC have what they need to understand the health of that new market. And what if something that requires EHR effort and cost was really important to ONC in understanding it? ONC might still decide it's too important not to do, even though –

**Sasha TerMaat**

Sure. I guess my question is more you've proposed in a variety of different domains like four or five denominators, five numerators, some of the numerators here, for example, seem significantly more complex to measure, to me, than others. Are all of these of equal value to ONC and other policy makers? I guess







what I'm trying to get into our recommendation is if there are metadata about this recommendation is super critical for ONC to have this information and this one is less important for ONC to understand and also super complex to measure that type of information will be helpful in prioritization because, ideally, we would pick ones that are that perfect mix of very valuable for policy making and for EHR purchasing decisions a and not pick the ones that are not going to be as useful for those purposes.

**Jim Jirjis**

Well, Sasha, can you give me an example of one you would think wouldn't be as valuable but would be high effort?

**Sasha TerMaat**

I'm going to defer to you guys as the value. But, to me, the volume of data transferred seems significantly more complex than the other ones.

**Jim Jirjis**

So, if we started with the notion of like by volume, you mean the total volume of data, how many gigabytes would be technically difficult to manage and, therefore, what is ONC going to do with that information in policy.

**Sasha TerMaat**

Right. And is the additional value of three here, III, worth the additional work to program it and data collect it from every health system? Or would ONC's insight from I and II be sufficient that we wouldn't want to prioritize III also?

**Jim Jirjis**

A comment about III, there is probably an A and B in III because there are some ands in there. And Ken, your thoughts on the value of just knowing how many gigabytes of what we're trying to accomplish there. But I definitely think the count of higher resources transferred is useful because if I'm ONC, I'm thinking to myself are people using it. What are the volumes? How many calls? So, not only was there a call but I think it's valuable in No. 3 to know count of resources.

**Sasha TerMaat**

And if you want to separate resources from gigabytes, I think that the resources one is simpler than the gigabytes.

**Jim Jirjis**

The gigabytes say more about performance of the system or what are your thoughts on that?

**Kenneth Mandl**

It's a good gauge of how much data is being considered to be of value by apps. It's a good gauge, I think, of what resources may be needed, for example, in terms of band width or cost of cloud or other metrics to understand. For example, let's say we learned that there is a very large amount of data transfer being used in high performing clinical sites. There may be other clinical sites that are precluded from participating in the information economy at this level. It's also important with regard to the cost of API use. So, unless we know how much data are being used, we don't know how reasonable the costs per API call are, for example.





**Jim Jirjis**

Hey, Ken, given what you said, if we look at the denominator, I get what you're saying is are we excluding anybody from an equity standpoint in the app economy. Could it be that maybe not all of the denominators [inaudible] [00:57:33]? If we're wanting to get a sense of that, wouldn't that be maybe like a per encounter? And then, the second part is maybe that doesn't help Sasha because it sounds like you're saying it's technically challenging to capture each call how many gigabytes per transfer. Is that your issue?

**Sasha TerMaat**

Yeah. I'm just looking here and this is a lot of different measures and reports to write. Which ones are going to be the most valuable for prioritization? Which one would you want first? Then, I can also give some insight into which one would be hardest to data gather and easiest to data gather. And measuring volume of data transfer, to me, seems hard and not necessarily quite as insightful as some of the others. So, I would suggest prioritizing that way. But I think my broad stroke feedback is just that I think the task force will have to prioritize a little bit within here.

**Jim Jirjis**

It seems like if we said what do you want first, I'm skeptical. There is some critical mass of measures that gives ONC enough of a picture without them just being left with more questions. And is it being used, how is it being used, and are there any ways it's being used that might exclude people? And what you're suggesting is prioritize a critical mass minimum set to start with that will, actually, answer ONC's questions and be sensitive to the volume of these and the complexity of some of them.

**Sasha TerMaat**

My experience from reporting is that we often don't really understand how we're going to use the data until we're looking at it, too. So, I think that informs my perspective of we should start with what we think will be the most valuable and once we're looking at the data, it will be much easier to develop the next round with that insight.

**Jim Jirjis**

Well, that's the question is what's the frequency of rounds?

**Raj Ratwani**

Sasha and Jim, we've got to transition. I appreciate the good conversation and maybe we can get some of those thoughts down into the Google Doc. I think coming up with some kind of prioritization framework here is going to be important. I want to make sure that Steve and Abby who have been waiting patiently get some time to jump into the clinical care measures. So, let's transition over to that now. If there is time at the end, we can come back to this. We have a little bit of buffer here where Jill and I were going to have discussion of other recommendations. I think we may be able to cut into some of that time as well. So, Steve and Abby, over to you.

**Preliminary Recommendations for Clinical Care Measures (01:00:15)**

**Steven Lane**

Yeah. I'll just run with it. I really want to acknowledge, Sasha, not only that you do a ton of work on the stuff we just talked about, she also has been working closely with our team on the clinical care measures. We,





actually, met Sasha, Abby, and some others earlier this week and tried to winnow these down to the point that we hope that they can move above the line quickly. So, if you just scroll down a little bit more, I'm not going to review the stuff we've already agreed upon. There was a tiny bit of wordsmithing that went into that but I don't think it's all that important. But we are, again, talking about viewing of summary of care records of viewing of CCDA documents now that have been received by the certified health IT. And in the original recommendations from Urban, they discussed parse and integrate. They used that terminology, which was kind of new terminology and already in certification there is the term incorporation and the definition thereof.

So, our suggestion was that in lieu of the terms parse and integrate, consider referencing and utilizing the existing certification criteria for incorporation of received outside data. And then, we have the reference and the language. So, that was one that we thought made sense. Are there any questions on that? Is anyone uncomfortable moving that above the line? Again, I hope to be quick here. The next one was to request future reporting, that is to say not in the first version of this regarding how often was data parsed and viewed separately from the received documents. I think that in the language we got from Urban, there was some ambiguity. It said how often is a document received, parsed, integrated and then, viewed. And at this point, up above, we have issues about received documents being viewed. The real question here was how often was the parsed data viewed. And I think there are other questions about whether it was otherwise utilized. But let's just focus on viewed now.

So, we proposed here that the denominator would be the number of unique CCDA's that were received that were parsed and have data incorporated as above or reconciled into the local system. That's the denominator. And then, the numerator would be the number of these unique CCDA's received where any of the parsed or incorporated or reconciled data is viewed in integrated form by end users and clinicians. So, there, again, we have another suggestion. And, again, this would be for sort of a road map future version item but getting that on the road map so that vendors could start to incorporate the software necessary to be able to report on that. So, we'd like to move those two above the line if folks are comfortable. Going, going, gone. All right. Super. The next ones were the use of third party clinician facing apps. And, interestingly down below, we just called them clinician facing apps. We don't identify them as third party clinician facing apps. So, I don't know if third party is redundant here or should be added below. Are we really talking about all of the same thing? I think we are.

The fact that they're first party, second party, I don't know. So, just a question as to whether we need that term third party. Does anybody feel super attached to it or should we let it go? Urban, in particular, you guys had that in your draft for this section. Did it have particular meaning?

**Gary Ozanich**

This is Gary. It would be okay to remove.

**Steven Waldren**

This is Steve Waldren. I think one of the opportunities here with third party means that it's not created by the vendor of the certified product.

**Steven Lane**





And do we care? Do we care that it's, actually, created by somebody else? Maybe we do. I'm not saying we shouldn't but I don't know why we care. If Epic has an app that I choose to install as opposed to Sally Hernandez selling me an app and I install that one, does it matter for the purposes of these metrics?

**Steven Waldren**

This is Steve Waldren. I think it matters is in the sense of are you creating an ecosystem or are you creating a module application because I think it's different if it were just Apple creating all of these apps for the phone, I think there is a difference there because you have to have an infrastructure to really support proliferation of third party apps that you don't have to have if you're the one creating all of the apps.

**Steven Lane**

And then, I'd ask the question, and we don't have to answer right now, but should we add that third party adjective to the whole list of recommendations below about the Smart on FHIR apps. So, I'll just leave that as a thought question because that's not my section. So, we'll go on. I want to be efficient here. So, we have really one combined suggestion regarding the third party clinician facing apps. One is to report on app usage versus app registration. As we discussed, while patient directed apps are really registered with the vendor, registration does not necessarily have the same meaning for clinician facing apps. So, we were really thinking that this metric was meant to focus on app usage as the title says, use of third party clinician facing apps. So, the point being that the reporting should be on the app usage versus the registration with the vendor or the enablement in the customer system because apps that are enabled that no one uses really are not of that much interest. If we are going to measure app enablement, it could be measured by apps listed as being allowed access.

That's probably more applicable than, actually, registration. So, within the certified health IT system, there is, presumably, a list of apps that are allowed access. So, that's how we would measure if you were interested in enablement as opposed to registration. And we felt that the app usage could be measured by the API audit trails and, certainly, all of the things that Ken discussed below require that kind of counting from the audit trails when you're looking at individual resources and individual FHIR versions. So, I think that's consistent. And then, we simply suggested that the reporting be done in these particular order of magnitude levels. And here we would say active use rather than registration in the reporting period.

**Sasha TerMaat**

No. I think we, actually, wanted the active registration as a baseline and then, the later ones would count use.

**Steven Lane**

Okay. So, this would really be registration and/or use because it would apply to –

**Sasha TerMaat**

You have to be registered before you could be used. I think it was Gary who said that ONC was very interested in the total population of registered apps. And so, the first bullet was intended to address that total population and then, the last four bullets would get at usage. L

**Steven Lane**

Got it. We just say registered apps.





**Sasha TerMaat**

We could cut that registered. The active registration is duplicative.

**Steven Lane**

Okay. Apps with active registration. Okay. I get it. And then, Sasha, you had one of your experts talk to the fellow who provided the public comment last time who doesn't seem to be publicly commenting today. Did you want to comment on that discussion?

**Sasha TerMaat**

We have set up a call for next week so we haven't connected yet. But we're going to get to the bottom of it.

**Steven Lane**

There was a question having to do with this up above our agreed upon recommendation, the very first one. It says metrics should be based on any valid CCDA document type received, including but not limited to the CCD documents. And we talked about taking out the word valid and the public commenter said, "No, no. That's really important." So, we are pursuing that in respect to the public comment. But we still have the word valid in there for now but that may be removed. So, again, we've got a few recommendations below the line here. Again, looking at app usage versus registration with the vendor, how one might measure these things and then, these reporting recommendations. So, does anyone object to moving those above the line?

**Sasha TerMaat**

My only comment would just be that I think some of this is duplicative of some of the ones we talked about below. And so, after we decide on the standards adoption and conformance measures, we might need to consolidate the list because I don't think we intend to be duplicative.

**Raj Ratwani**

That's a fair point. And we can, certainly, do that after this.

**Steven Lane**

All right. Above the line, any objections? All right. Wonderful. Thank you. Maybe that will help catch us up a little bit. And Abby, did you want to add anything?

**Abby Sears**

No. I think you did great. Thank you.

**Discussion of Other Recommendations (01:10:58)**

**Raj Ratwani**

Great work. Thank you, Steve and Abby, for all of the work and for the fast pace there to get us some time back. So, what we've done is we've allocated a little bit of time here. So, we have public comment at 11:20. So, we have about eight minutes now where we wanted to go back up to the top of the document and run through some of those early measures that we discussed several weeks ago that I think still need a little bit of consideration. So, I still there are some under patient access measures that are below that line or in that





consideration phase. And we'd like to look at some of these and see if we can start moving them above the line as we start moving towards the need for a concrete set of recommendations that we can get on slides. Jill, please jump in here as well as we walk through these. So, looking at the ones up on the screen now, I also want to try and move this pretty quickly, are there any concerns on moving any of these five that you see under recommendations for further discussion above the line?

**Steven Waldren**

This is Steve Waldren. And I don't think we need to differentiate between proxy and direct access. I think it's access. I think it's too difficult to think about that.

**Steven Lane**

I think that's fine. And as the person who initially recommended the differentiation, I'm happy to let it go.

**Sasha TerMaat**

And Raj, I agree.

**Raj Ratwani**

So, the recommendation is to strike proxy from that very first one?

**Steven Waldren**

Yes.

**Raj Ratwani**

Perfect. Thank you.

**Sasha TerMaat**

I think my only concern is the very last bullet's II. I think we should have an inclusion list of CPT's.

**Steven Waldren**

This is Steve Waldren. Zahid and I did have a conversation about encounter. And I just sent it to Mike this morning. So, we can either talk about it now or talk about it next time. So, maybe I'll just tell you what we thought made sense. So, we thought since the encounters also talked about active patient and several parts of different measures throughout the entire set that we've been looking at that we should think about it being a small set and those that are the most common. So, Zahid put together a list of SNOMED codes for inpatient. I think it's less than 10 codes. And then, I looked at the value set database and found an outpatient value set list that is stewarded by NCQA that has 47 CPT codes. And they're the most common kind of ambulatory codes. And our recommendation is going to be using those two sets to represent encounter and focus it on active. So, I'm sure we'll be able to share those a little bit later. But that's our though as opposed to trying to be expansive regards to what could all of the encounters be.

Just what are the most common, routine encounters in the ambulatory space and in the inpatient space and use those as the metric.

**Sasha TerMaat**





So, generally, I'm supportive of an inclusive list or a list of what to include rather than a list of what to exclude. My one fear, Steve, would be specialty products. And if we're looking at the most common codes, was that still going to give an applicable denominator to a specialty EHR that only focuses on ophthalmology use case or something where maybe their use of encounter types is going to be not the most common.

**Steven Waldren**

I guess the only one that I could think of is if it is a specialty product for a procedure. So, if it was a surgical EMR only. Otherwise, the 992 codes, either 0 or 1 for new or established are kind of the basic ambulatory codes now that we've kind of eliminated a lot of the consultation codes.

**Sasha TerMaat**

Yeah. I think it would be uncommon to have a certified product that was exclusively used in procedures. But I don't know that it's impossible. So, I think we'd want to think about that as we designed this program. What would be the consequences if there were a product like that? Is it okay that then, they would report nothing, etc.?

**Steven Waldren**

This is Steve Waldren again. What would your thoughts be if you don't have encounters in those two sets, either the ambulatory or the inpatient then, you report on the top 10 encounter codes for your population of total encounters that you cover for your certification product.

**Sasha TerMaat**

I guess I would favor just making a more expansive value set. There are a lot of quality measures that define encounters probably similar to what you and Zahid have put together. And I think if we pick some fairly large value sets to define that then, that gives consistency across products. I worry that each product might be reporting for a different set of encounters. That introduces its own challenges with data interpretation because a telehealth product might exclusively have telehealth codes. Whereas other products may not. And then, that introduces a degree of inconsistency that's going to make data interpretation hard.

**Steven Waldren**

I'll have another conversation with Zahid and maybe, Raj, we can bring that back as another conversation point in our next meeting.

**Raj Ratwani**

Yeah. That seems fair. Certainly, we'll talk about this as next steps. But the next meeting will be, hopefully, a review of the slides with these recommendations. So, we can still make adjustments at that point. We'll flag it here. And, certainly, if you can continue to inform us that would be great. Can we jump down to the next set here in the last couple of minutes that we have. So, a lot here that are still for further discussion. I believe some of this may be repetitive. But thoughts on these recommendations.

**Steven Waldren**

For the first one, I would just use the same categories we just moved above the line from the others for consistency. I think that makes the most sense.







**Raj Ratwani**

Is everybody okay with that and then, this one will go above the line? Okay. What about the other ones over here? I'm moving them up unless we hear any comments now. You've got about 45 seconds and then, we're going to switch over to public comment.

**Sasha TerMaat**

I don't know that we had consensus on uses in different calendar months. I guess it does note that that increases the complexity. Was there a consensus that that complexity was merited? Or is this just noting that that is the case for future consideration?

**Steven Lane**

I don't think we really need to be tracking seasonal variations.

**Steven Waldren**

I agree. I think we don't move it above. And if anything, in the preamble, we can talk about the fact that access over time was something to look at **[inaudible] [01:19:40]**.

**Raj Ratwani**

Perfect. So, if we can note that in the document that would be great. And we can flip over to public comment.

**Public Comment (01:19:48)**

**Mike Berry**

Thanks, Raj. Operator, can we open up the line for public comments?

**Operator**

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

**Mike Berry**

While we're waiting, I just want to remind everybody our task force call next week was moved to Wednesday, August 25 instead of Thursday. So, we're meeting Wednesday the 25<sup>th</sup> at 10:00, same time. So, I hope you can join us then. Operator, do we have any public comments?

**Operator**

No public comments at this time.

**Mike Berry**

Thank you. Raj?

**Raj Ratwani**

Thanks, Mike. So, why don't we flip back to the document? Jill, I think I'm catching your comment here but it looks like we should use the last few minutes that we have to continue working through this. Does that work?







**Jill Shuemaker**

Yes, please.

**Raj Ratwani**

Okay. So, it looks like a question about privacy data. I think we're okay here. So, we're good here. We can keep scrolling down. Are there any comments on this up on the screen now? I hope everybody can see it.

**Sasha TerMaat**

I don't know that we've hit consensus on this question of what the best way to measure success is. We have a variety of considerations in the recommendations for further discussion piece. Maybe we need to just frame those as this is of interest and we need to think further beyond this task force's expertise on the best way to handle it.

**Bryant Thomas Karras**

This is Bryant. We could invite the Immunization Registry Association to formally speak or present to us the state and capabilities of immunization registries across the country to send acknowledgement messages. Sorry. Am I commenting on the wrong section? We're talking about IAS, correct? Yes. Thank you. I think if we have an extra meeting space available, we could formally ask a member of IRA to present as a speaker on the agenda.

**Sasha TerMaat**

My big picture thought is that we have more work to do as a task force on some of the measures we talked about than nit picking probably the best way to measure success in this particular metric. So, I guess if I were prioritizing our future task force times, I would want to dig in more to some of the meatier questions we had about some of the API measures.

**Raj Ratwani**

Yeah, Sasha. I think that makes sense. Overall, the time is tight so we don't have a lot of capacity to bring in some additional speakers at this point. That's something we could, potentially, elect to do as a broader HITAC. But I think in the remaining meetings that we have, it's quite tight in terms of getting these recommendations onto the slides, another review of those and then, getting them to the report. So, I like the idea of Sasha's recommendation of a broader comment around measuring success and how that's going to have to be thought through further. Are there any objections to that?

**Bryant Thomas Karras**

I'm not understanding. The measure of success, specifically, here refers to the IAS measure. So, I think a broader discussion of success might not be useful. And given the importance right now in understanding that this measure doesn't take effect for some time, I still think that it will be critically important to our nation's health that we get this right.

**Sasha TerMaat**

Well, I agree. I think what we're saying is that this task force may not have the experts to a point of we don't have the IAS representative and we won't have the time to write the specification for the measure. So, I think instead what we would say in our recommendation is that our recommendation is that the measure





be constructed with an appropriate indication of success whether that is total messages minus fatal errors, acts, etc., requires some further research, maybe public commentary from other experts and so forth and would be handled later.

**Raj Ratwani**

Bryant, what do you think?

**Bryant Thomas Karras**

I don't think it would take much and they have shown an interest in working with us. So, I'm torn to put off for later what we could do now if we had time. But I'll defer to the chair.

**Raj Ratwani**

Let Jill and I talk about this one maybe offline as we look at the overall schedule for the next two meetings. And if there is an opportunity to squeeze that in, we can, certainly, do that. For now, I think we leave this in the way that Sasha framed it. Let's keep scrolling down. So, here are a couple of edits to these two on screen now. Is there any hesitancy of moving these up?

**Bryant Thomas Karras**

I simply replaced state with jurisdiction to take into account the territories and District of Columbia.

**Sasha TerMaat**

That's fine, although the actual proposed draft did say state. So, I think the point was if you want state, you have to be more clear. You're maybe making a separate recommendation, which is that they don't want state. They want jurisdiction. And I think that's, actually, captured above because weren't we recommending that it be differentiated by registry?

**Bryant Thomas Karras**

Correct. I was trying to reflect that not all registries are at the state level.

**Sasha TerMaat**

I, actually, think we can just cut this because we recommended differentiating by registry. And so, there is not going to be a jurisdiction or a state based stratification.

**Final Remarks (01:27:43)**

**Raj Ratwani**

Good point. So, we can strike those. In the last minute we have remaining, can we continue down? I think this is all kind of on hold. So, I don't know that there is much we can do with this right now. So, we can keep moving down a little bit. And I think we're just about at time. So, why don't we pause there and just take a last minute to quickly talk about next steps? So, our hope is that we can begin to, and I think the ONC and Urban teams have started doing this, moving those recommendations that were above the line over to the slide format for our final set. Jill and I will meet tomorrow to work through some of these and see what we can comfortably move over. We would then hope to have that slide set sent out to the task force at the beginning of next week ahead of the meeting on Wednesday. So, the meeting on Wednesday that, unfortunately, I will miss but Jill has graciously agreed to handle it will be focused on reviewing all of these recommendations and continue this discussion as we were just doing towards the end of this meeting.





Jill, anything to add to that?

**Jill Shuemaker**

No. I think that's great. We will do as much as we can in prep and then, everyone will have a final feedback by the end of next week. Thank you, everyone.

**Raj Ratwani**

Thanks, all. Take care, everybody.

**Adjourn (01:29:27)**

