



# Transcript

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

July 29, 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. I'm Mike Berry with ONC and I would like to welcome you back to the EHR reporting program task force. We're appreciative of all the task force members' help throughout this process. We are going to kick-off the meeting with roll call. I'm going to start with our co-chairs, so when I say your name, please indicate you are present. Raj Ratwani.

### **Raj Ratwani**

Here

### **Mike Berry**

Jill Shuemaker.

### **Jill Shuemaker**

Here.

### **Mike Berry**

Zahid Butt. Jim Jirjis. Bryant Karras

### **Bryant Thomas Karras**

Present.

### **Mike Berry**

Joseph Kunisch.

### **Joseph Kunisch**

Here.

### **Mike Berry**

Steven Lane

### **Steven Lane**

Good Morning.

### **Mike Berry**

Kenn Mandl. Abby Sears. Tasha TerMaat.

### **Tasha TerMaat**

Good morning.

### **Mike Berry**

Sheryl Turney. I think there's some feedback on your line. Thank you. Sheryl Turney? I believe she's absent today. She'll be back. Steven Waldren.

### **Steven Waldren**

Here.

### **Mike Berry**

Thank you very much and I would like to turn it over to our co-chairs Raj and Jeff. Thank you.





## Opening Remarks (00:01:26)

### Raj Ratwani

Thank you, Mike, welcome back, everybody. Very quickly, we have a very full agenda today as we likely will for the majority of these meetings. We are going to do a quick recap of the patient access measures, so Steve Waldren will be leading that discussion and walk through of those. So, we'll spend a little bit of time on that. The bulk of our time will be focused on the public health measures and Bryant and Sasha have agreed to take this one on. We'll do our best to leave ample time for public comment because I understand there are several folks who want to comment and then we'll adjourn. We can jump in.

Last meeting we spent a little bit of time going over the overall charge of the task force and the different measures and so forth. We are going to skip that to save a little bit of time. So, the slides are there and were sent out. We can go right over to the meeting process so if we can please jump to slide six. We met to discuss the best way to work operationally. **So**, we are going to make a little bit of adjustment today as we walk through these measures. **So**, we have the urban and ONC team that has always been capturing notes for us, but in addition to that, we are going to capture the recommendations that are coming out of our discussions. Those are essentially going to fall into two categories. There's going to be some recommendations that I think that the task force overall agrees on. So, we'll put that as new consensus recommendations. And then there's going to be some items that we don't fully have consensus on but that are potentially some good ideas so we are going to document those in a separate section.

I don't think we're able to show both the presentation and those recorded recommendations at the same time, so we'll have to flip-flop between those two. If people are feeling like they want to see the recommendations that are being documented in real-time, we can flip over away from the presentation. But my understanding is it's not feasible for us to present both at the same time. So, that will be the process change that we're making here. And then after the meeting, the ONC and urban teams will synthesize the recommendations a little bit further they captured. They will go back to the folks they're leading, they will come to Joe and myself, and go to Bryant and Sasha for additional refinement. That's going to be the process that we are going to use for each of these meetings as we're diving into the different measures.

So, that was meeting process work. We can then jump to the next slide. I think this is -- we've covered this, so I'm going to skip over this one as well and skip over the next slide as well and we'll go right to slide nine, so we can recap the preliminary recommendations for patient access measures. Steve Waldren, if you're on, do you want to walk through the recommendations that emerged?

## Preliminary Recommendations for Patient Access Measures (00:04:46)

### Steven Waldren

Yeah, I'm happy to do that. As Raj says, there's kind of two categories here, first being I think the ones that seemed like we did agree on and those that seemed like recommendations that were made but maybe didn't get complete consensus on the group. Those that we did, I feel like got agreement on, the first was how we would prioritize the measures. They were prioritized as listed. The one listed number one was the highest priority and that that was listed number two was the second highest priority. The next one, the definition of active patient would be that of one encounter within the reporting period. Those two seemed to be pretty good consensus-wise, maybe just a second if anybody disagrees right now, I know we are not necessarily voting, but if anybody has any concern about those being potentially the ones that we kind of think make sense to put toward a vote later, please air that right now.





Great. So, the other recommendations then for further discussion. Maybe let me take, if you're looking at the Word document on the screen, let me jump to the last one, because it deals with the further clarification of the recommendation that we think we are in agreement on as regard to the definition of active patient. One thing that was brought up was what constitutes an encounter. There was a recommendation that maybe we should put together a list or a list should be put together of CPT codes that would represent what we mean by an encounter. To recap, we talked about the potential of telemedicine businesses and other businesses like that, should they be included. Again, any concerns about trying to put together such a CPT list? So, maybe Sheryl and I can kind of put together a strawman for our next meeting or so and bring that back to the group for consideration.

Let's head back up to the top of the recommended. One thing was that we talked about the capturing of who is using the either portal or third-party access and determining if we should try to have a measure around a proxy use needing to be captured. My personal concern is I think that adds a lot of complexity and challenge and kind of where we're at in regards to patient access. I just don't think it's worth the squeeze at this point in time, but I think it's something to considerate a later time. And I guess Raj and the ONC team, were you thinking we were trying to disposition these to kind of come up with what the recommendations would be, or were we just kind of reiterating these are the ones we're trying to determine if they should be a recommendation or not and then offline disposition and what the actual recommendation would be?

**Raj Ratwani**

We have about 10 minutes to go through these recommendations, 10 minutes more. So, if it warrants a little bit further discussion or there is consensus on these and we can move them up to the agreed-upon recommendations, great. But any lengthy conversations about these, we'll need to take offline or reconcile through other means.

**Steven Waldren**

Great. Anybody thinking that having a measure around proxy use? This would be a caregiver or other, is a high enough priority that it needs to be in this first round of our recommendations on what should be patient access measures?

**Sasha TerMaat**

Can I clarify your recommendation, Steven?

**Steven Waldren**

Sure.

**Sasha TerMaat**

When you say determine a proxy use needs to be captured, are you suggesting the measured would explicitly exclude proxy access or simply that the measured would not differentiate whether a proxy was accessing the patient's data or whether the patient was doing it herself?

**Steven Waldren**

That's good and we didn't really talk about that. I would say the latter, that we wouldn't require the reporter to different as long as access was achieved. I would be interested to see what others would think.

**Steven Lane**

I don't know if you guys are monitoring the hands. This is Steven Lane. I had my hand up.

**Raj Ratwani**

Steven, go ahead, we just saw it. Please, you go first and I believe Zahid is next.

**Steven Lane**





I think the way Sasha characterized that is appropriate. I think my suggestion would be to not differentiate patient access and proxy access. I think we are just talking about access at this point. I think differentiating those in the future might be interesting. I like the way, Steve, that your group put these together and I certainly agree with all the ones you've noted so far. And I think that we have been invited to, I believe, prioritize and say let's start with this and in subsequent iterations move on to that. I think that is a good thing to do to try to set priorities. I think one of our real goals here for this whole program to be successful. The way to make it successful is to keep it skinny and doable the first time out of the gate and learn from and build on that in subsequent iterations.

One thing I know you're about to get to is that last bullet about the numbers of users. I mentioned this, I think, maybe in the document, and I'll mention it again, I don't think we should skip over 1000. I think we should get each order of magnitude in there, on your slide 13, as well as there. So, we don't want to lose an order of magnitude there, because I think a lot happens between 100 and 10,000.

**Raj Ratwani**

Great. Okay. And I think Zahid is on now. Do you want to go ahead with your question or comment?

**Zahid Butt**

Yeah, so in this active patient definition, is the intent to include all encounters or just ambulatory encounters? Does it include the inpatient encounters as well?

**Steven Waldren**

I think that's a good point. I guess we'll probably have to include both because there are going to be some cert that's only certified for one of those two environments, your ambulatory or inpatient, so I think we'll have to have CPT codes for both.

**Zahid Butt**

Right. That's where I was going to recommend to add the inpatient's SNOMED codes, the ED and inpatient measures are using SNOMED codes instead of CPT.

**Steven Waldren**

Is Sheryl on today?

**Raj Ratwani**

I don't think she was able to make it today.

**Mike Barry**

Sheryl had a conflict, she couldn't.

**Steven Waldren**

Okay. I don't have as much familiarity with all the different types of inpatient codes. If Sheryl does, we're okay, if not, we need a volunteer to help us.

**Zahid Butt**

Sure. I would be happy to volunteer because we do a lot of that current reporting.

**Raj Ratwani**

Great. Thank you.

**Steven Waldren**

Any other hands up?

**Raj Ratwani**





I don't see any others. Any other comments or questions for Steve?

**Steven Lane**

Just support for that notion that we should be looking both at inpatient and ambulatory and differentiating them and knowing that some products are certified one way or another, so it should be product specific ideally.

**Raj Ratwani**

Are we able to move that one up the notion of product specific inpatient and outpatient, are we able to move that up to the agreed-upon? Is there anybody that disagrees with that?

**Sasha TerMaat**

I don't know if a patient has both a hospitalization and an ambulatory visit and logs into their portal how you would report it in a product specific way. If we want to specify that we would count that for both products, then I think it's fine. Otherwise, I don't know how you would differentiate. The access to the portal is not specific to ambulatory or inpatient product.

**Steven Lane**

I agree, Sasha. It should be counted for both products. If they have an inpatient encounter in the reporting year and log-in, it gets credited. If they have ambulatory encounter in the reporting year and they log in, it gets credited. I think that's the simplest way to do it.

**Raj Ratwani**

Agreed.

**Steven Waldren**

Let me make sure -- Go ahead.

**Zahid Butt**

This is Zahid. Just one more comment in relationship to that differentiation. I think there was a suggestion, or at least a consideration for creating stratification around inpatient and ambulatory. And I think you'll have the same issue there, because the measure's at the patient level and it doesn't get linked to any of those encounters directly so I think it would affect that issue as well. It would be hard to stratify it if the measure is at the patient level.

**Steven Waldren**

I wanted to, Raj, based on time, I think we're getting to the point that we understand that we want to include both ambulatory and inpatient and that want this measure is kind of focused on the patient, I think either of those makes sense and I think we also want to make sure it makes sense for what type of product it is. If it's certified in both, the product is able to say that it's any of those CPT codes. But I think we may want to do a little bit more work because what if a product has different -- if there's different portals and then you have an inpatient encounter but you don't have any ambulatory encounters, then you have to count that, right? Because they could access both those and neither of those portals. I think we have to think a little bit more through the all the permutations a little bit more, which is probably better for an off-line discussion.

**Sasha TerMaat**

My suggestion would be to make the denominator distinguished between the ambulatory domain and inpatient domain by the SNOMED codes and the CPT codes. That would be the product indicator. And then the numerator actions, whether app authorization or portal access, those don't have anything to do with the ambulatory versus inpatient domains, so those would be reported regardless.

**Steven Waldren**





Okay.

**Raj Ratwani**

I like that.

**Steven Waldren**

Makes sense. So, let's keep going on some of the other recommendations for further discussion. The second bullet there, consider measuring the ratio of access for patient portal versus third-party apps. I think this is one of my recommendations because I think it would be good for us to understand how much access are we getting on the third-party apps versus portals. But I'm wondering if this is kind of a second tier one. So, I guess my recommendation would be to say let's not say that it's not included yet, but let's also not say that it's discluded. As we look at other sets of measures we have based on the totality of measures we think are high priority, we would then determine if this one meets enough to include it as a recommendation or completely exclude it. I welcome others' comments.

**Sasha TerMaat**

If numerator 1A, 1B, and 1C are all reported, wouldn't it just be possible to manipulate the data to get a ratio anyway?

**Steven Waldren**

We'll look at that. I think that could be the case.

**Raj Ratwani**

Yes, I think that's the case.

**Steven Waldren**

All right. We'll use that as the notion and remove this as a potential recommendation. So, the next one then is consider collecting gender and social determinant data including sexual orientation and gender identity. So, we talked about this and there was some strong recommendation to include it and then there was some discussion about the complexity of collecting this data and using it as a segmentation for the measures. I guess, where do we think we're at relative to making a strong recommendation that these be included as part of the segmentation like race, ethnicity, as the measure description?

**Raj Ratwani**

I personally think this is one that should be included and probably one that's going to cut across several different measures. So, we may want to even, if we have others like that, we can pull those out in the report that state these are cross-cutting versus ones that are specific to particular measures.

**Jill Shuemaker**

And Raj, I think we should also clarify if this is patient social determinants or if it's provider. Those that are purchasing the software versus those that could be using it.

**Steven Waldren**

I guess my thinking based on the conversation was that these were the categories of the patient, too. So, it's not the provider and it's not the accessor either, so we don't have to worry about if a proxy person is accessing it. This is just for the patient.

**Jill Shuemaker**

Right. I agree.

**Zahid Butt**







This is Zahid. I think that gender and ethnicity are the two elements that are usually more readily available, but this other social determinant is going to be the one that's going to be, obviously, more complex, and probably not as prevalent in the current collection.

### **Raj Ratwani**

I just want to make sure we're watching the clock here. If we want to leave plenty of time for the next set of measures. Let's stop discussion on these particular ones and transition to Jill who can take over the discussion of the public health measures and we can continue some work on and refinement on these set of measures asynchronously.

## **Discussion of Public Health Measures (00:21:47)**

### **Jill Shuemaker**

Thanks, Raj. If we could go back to the slide deck, please. Just as a reminder that all the task force members have been given access to the Google Docs. So, you'll be able to go in on the Excel spreadsheet, you can make notes, you can review the measures, and add some comments before the meeting. That would help the discussion as well. It also might be helpful to pull up the PowerPoint deck and the Google Docs during the discussion because we'll be toggling back and forth between the PowerPoint and the recommendations that we're coming up with during our discussion. So, Bryant and Sasha have volunteered to take us through this discussion. So, Bryant has asked that who from ONC introduce the measure and give a high-level overview of the public health measures. So, if we could go to the next slide and do that.

### **Fredric Blavin**

This is Fred Blavin from Urban. I'm happy to quickly walk through this. I don't have a whole lot of time on motivation. I think this was discussed in detail during the HITAC meeting and everyone has seen this slide before, especially from the motivation from a health and policy perspective. One key motivation I want to emphasize is these data are typically, for the measures we proposed here, are not publicly available and are not typically collected or collected by [inaudible] [00:23:30] within existing survey data, so there's value-added of collecting these types of measures. Also, they do apply to the certification criteria F-1. The two main measures are public health, which address these two questions in terms of how critical these providers are using their certified health IT to send immunization and vaccine information to IIS, and how frequently their providers are using their Health IT to query IIS for immunization forecast and histories. Next slide, please.

Here are the two measures that address those questions. On the left-hand side you see the specifications for measure one and measure two. So, the first measure looks like any other information on the percentage of vaccinated individuals with immunization data was sent electronically to immunization information systems. The numerator would be individuals whose immunization information was electronically submitted to the registry. The proposed denominator is individuals with an immunization administered. The second measure captures queries, so the percent of IIS queries with individuals made per encounter. In this case, the question open for discussion is defining that denominator, whether or not we want to use individuals with an encounter or potentially use a denominator consistent with the one first measure such as the number of individuals with an immunization administered.

For both these measures, we would, if you look at the second column, these are some of the consistently reporting elements and formats, we would want to collect all of these data separately by state and also by state and different potential characteristics such as the setting of the provider or type of certified health IT product, and the state, and age group to capture differences in different types of immunizations for adults, adolescents and children, and infants. Again, we require, like all measures, to have the developers report the numerators and denominators and not just the percentages. That way we can manipulate data and calculate percentages that are consistent and comparable. So, if we want to look at number two as a percent of number of individuals within an





encounter or as a percent of number of individuals with an immunization, we would have that flexibility to do so.

There's also the similar comment of the frequency of reporting and the look back period and how we would want to define that from the numerators and denominators. I think this is a comment that applies to all the measures in terms of how we define encounters and also what time period. And for this measure, since we're requesting a lot of data at the state level and state and characteristic level, we don't think we would necessarily need to look at distribution, quintile distributions or more detailed distributions since we would already have such rich subgroup data and we are already requesting a lot of this data from developers to report in this area.

From here I think I can pass this along to Bryant. The next slide includes some discussion questions that we had on these measures and I think probably Bryant and the rest of the team have some additional questions for discussion to pose to the task force.

**Raj Ratwani**

Joe, quickly, before we jump into that, Abby Sears has her hand up.

**Jill Shuemaker**

Abby, did you have a comment? We are not sure if it was for this discussion or the previous one?

**Abby Sears**

I put it in the chat. Sorry. I'll take my hand down.

**Jill Shuemaker**

Thank you, Abby. Bryant and Sasha, if you want to go forward.

**Preliminary Recommendations for Public Health Measures (00:27:42)**

**Bryant Thomas Karras**

Great. So, I first of all wanted to, in preparation, wanted to summarize that we gathered input from recognizing that the public health measures focused on the immunization registry components both for the reporting of the vaccine delivery to public health and immunization registries that we operate, state public health, as well as the relatively new addition of a bidirectional query and response capability to get forecasting and histories back from those registries to be used for clinical decision-making in terms of what vaccines should be given in a visit. We totally recognize in the public health community that this is important and essential. I'm sure with what people are seeing in the news these days, it's completely understandable. We thank ONC for prioritizing these measures and having done that prep work that started on its path before the pandemic hit us, and continued throughout, so thank you for that.

We assembled some meetings in preparation for this to gather input from AIRA, the Association of Immunization Registry, as well as some key participants that were involved in previous task force, that were involved in immunization hub activities, and interstate exchanges and try to understand how best the current state is to be represented in successful use of these certified technologies. I think some of the folks who were part of those discussions and contributed to the thinking are in the audience and may make comment during the public comment period, or feel free to chat in comments as we're progressing through this discussion. I'm wondering, Sasha, should we put up the spreadsheet that we developed in those preparatory meetings, or how best do you think we should proceed?

**Sasha TerMaat**

Maybe we could talk briefly about these questions and then switch over to the spreadsheet because I think we maybe answered the first one in some of our preparatory discussion and could just bring





others up to speed?

**Bryant Thomas Karras**

Sounds good. So, one thing that was addressed in our discussion was, as many of you are aware, public health is a federalized process. Each state is responsible for public health response within their jurisdiction. And as such, state laws do differ from state to state in terms of the authorization for immunization registries and what parts of that information can be shared federally, which explains some of the earlier assumptions that information is not necessarily made available, especially not at a line level, to the CDC, for example. So, to what extent do state laws prevent immunization data from being shared? There are oftentimes processes that would be put into place. And for a vendor to have access to the information, they'd have to have business associate agreements or contractual agreements in place that allowed them to aggregate the information needed to operationalize these measures. Making sure that those were compliant with the policies of the states in which those customers reside. Sasha, did you want to review this .

**Sasha TerMaat**

That's a good summary. We had talked about this in respect to the patient access measures also, right? If the data use agreements in existence today between both registries and EHR users and EHR developers don't permit this type of data collection and use, then those agreements would have to be amended for the purposes of this reporting program. I don't know that it's particularly different for these measures than what we already covered with patient access, and I think with that noted, we can kind of move on to the next question.

**Bryant Thomas Karras**

I think the first dot points I think are related in that record level data, changes might be needed to be made to a given EHR system in order to aggregate information out of it and report it as opposed to tallying up on a record-by-record basis, mapping those into appropriate age groups rather than reporting individual ages of every record, for example.

**Sasha TerMaat**

My thinking is that any type of stratification that we do is going to have some amount of complexity token, so I think it's up to us to prioritize where do we want to spend our complexity tokens across this and the other measures. Age of the patient is relatively simple, in my mind, even if we wanted to group ages. That's potentially simpler than state or setting, actually. I put into the chat even that if you say state, I'm immediately thinking from a reporting perspective, do we care about the state of the registry that the immunization is submitted to, the state of the patient's address, or the state of the provider's office location. All three of those could be the same, they could be different. But to write a consistent report and run it across different systems, we'd have to know.

And then when you're thinking about your reporting complexity and the hardware, if you are going from a concept in a database of immunization administered and you want to get to the state of a location, you're traveling from the immunization administered record to maybe the patient record to the encounter record to an address. There's like a number of linkages because the immunization administration itself probably doesn't have a location on it. So, all these things are possible. I think it's just going to be a question of where do we want to spend our complexity tokens and how do we make sure we're clear enough, if we decide to spend complexity tokens on something, like state, that it's done consistently.

**Bryant Thomas Karras**

And I think that understanding that these are likely to be annual measures and that people are inherently mobile, it would make more sense to pick something that isn't going to change from year-to-year, like the location of the facility or of the provider, because it's unlikely to move across state lines.





**Sasha TerMaat**

I actually think the simplest would be the state of the registry it's submitted to or queried from, personally.

**Bryant Thomas Karras**

In case there's a provider that happens to be across state lines but their patients all preferentially use the neighboring state's registry? That's possible but I'd have to put some thought into that.

**Sasha TerMaat**

Just because the reporting will be simpler on the registry versus the provider's office location, especially when providers practice in multiple locations or there are temporary vaccine clinics and so forth.

**Bryant Thomas Karras**

I'll have to do some thinking about that and consult with AIRA if there are instances where providers are needing to report to two different registries because their patient population lives in two different jurisdictions. That definitely raises some complexity.

**Jill Shuemaker**

I think we could make sure that we're aligning with what other programs, definitely. As we talk through this, making sure that providers aren't burdened at all. So, if they're having to report in different ways, that we are not adding to that burden. So, it sounds like we can move that to a recommendation that we do that level of reporting. Is there any comments on that particular piece?

**Sasha TerMaat**

What, Jill, are you suggesting as the recommendation?

**Jill Shuemaker**

That one of the levels of reporting is the state level of the provider.

**Sasha TerMaat**

I actually prefer the state of the registry.

**Jill Shuemaker**

The state of the registry, okay. Any comments on that? Is that something we can add to the recommendations?

**Steven Waldren**

Sasha, this is Steve. Would you be able to help just a little bit on the numerator then? So, is it all the ones that should have been reported to the registry or the ones that were reported to the registry? And how would you determine that it should have been reported?

**Sasha TerMaat**

I'm looking at measure one. The denominator, I think, will be the number of immunizations administered. I'm not going to say the number of individuals with immunization because I think it will be actually more practical to have the denominator be the number of immunizations administered. The numerator will be the number of administrations whose information was electronically submitted to the registry and you would have a stratification of the numerator if there were multiple states involved to say, okay, the denominator was 100, the numerator was 90, 30 of the numerator was to the Missouri registry and 30 of the numerator was to the Illinois registry. I'm blanking on how many more I had left in my numerator there doing math in my head. It would be a stratification, not a separate numerator.

**Steven Waldren**





Thank you. I support that.

**Bryant Thomas Karras**

I think that would add a little bit of complexity to installations and health systems across state lines, as you illustrated, Sasha, of stratifying the numerator across the different jurisdictions that they have a presence in. In our discussions we added the word successfully submitted to public health, successfully submitted to the registry, to differentiate a submission that wasn't successfully received or wasn't successfully formatted, wouldn't count as a successful count in that measure. Jill, did that answer your question?

**Jill Shuemaker**

It looks like we're still having some discussion and I see some comments by Mary Beth. Mary Beth, would you like to share what you put in the chat?

**Bryant Thomas Karras**

Mary Beth's mic might not be active yet. Are you able to speak, Mary Beth?

**Jill Shuemaker**

She's not able to speak.

**Raj Ratwani**

Not until the public comment period. Jill, if you want to read her comments out loud, that would be fine.

**Jill Shuemaker**

Thank you for that catch. She wrote, "Just as a note that some IIS function at the county/city level, such as Philadelphia or New York City. So, a decision will need to be made to segment them out or rule them up at the state level."

**Sasha TerMaat**

Yes, my thinking is that we know how many outgoing interfaces there are, so if you have a city specific or jurisdiction specific interface, any of those could be a stratification straightforwardly.

**Bryant Thomas Karras**

City states like Los Angeles and New York City, obviously, might be handled differently. But perhaps there are certain states, for example, where the registries are operated at the county level, not the state level.

**Sasha TerMaat**

I guess what I would really be suggesting is ditch the state concept and just stratify by registry. Regardless of what level the registry is at, so that your numerator for measure one would give a registry stratification, in some cases it may all be the same registry, in some cases there would be multiple.

**Jill Shuemaker**

Okay. All right.

**Bryant Thomas Karras**

The last two dot points, should we move on to those?

**Sasha TerMaat**

Yep.

**Bryant Thomas Karras**





So, I think that the third dot point I think obviously queries via a portal that's operated by the registry itself wouldn't be able to be recorded by the EMR EHR vendor because of the nature of those products. So, I think that doesn't bear or need much discussion. There should be some recognition when this measure is analyzed that many providers have made a conscious decision to, rather than implement, especially if they don't give very many vaccines, rather than implementing an optional module for an immunization registry automatic interface, they may have elected to continue to use a manual log-in portal to report the vaccines they've delivered or do the immunization forecasting. And I think that that may still be true. It will be difficult for us to tease that out from this measure. Any comments on that, Sasha?

**Sasha TerMaat**

No.

**Bryant Thomas Karras**

And then the last dot point, we already had some discussions about the discussion of encounter versus patient. In our prep discussion, I made the suggestion, and have backed off from it, that maybe we should make the denominator encounters at which a vaccine could be delivered or would potentially be appropriate. And of course, that would be impossible to tease out as a denominator in a given EMR. So, we need to come up with a denominator that does make sense. I do think that, although there would be a great benefit in doing it potentially by patient so that you could see the patient over multiple different concepts, I think that encounters may be simpler. Perhaps we should pull up the spreadsheet to look at the discussion that was --

**Sasha TerMaat**

Yep. To elaborate a little while we pull that up, I also felt encounters would be simpler for measure two than individuals. If we count by individuals, we would have to define for multiple encounters what was expected to qualify in the numerator and would sort of muddy the waters if four encounters should, theoretically, get four different histories, but we got it at three instead of out of the four, we end up reporting that as either zero or one. It loses some of the granularity and usefulness.

**Bryant Thomas Karras**

Yes. And especially over what time period is a cluster of encounters still relevant? You have three different visits within the same week period or month period, one query to the immunization registry or decision support might be sufficient for all of those, but if their visits were three or six months apart, maybe that query should have been repeated. So, it would be difficult to interpret, especially in pediatric populations.

**Sasha TerMaat**

The cell that had our comments was 6C where we were noting some of the discussion about measure 2, the considerations about having it be by individual with a numerator of the number of responses to queries. And I think after we discussed through some of the notes that we jotted down here, we felt that it would likely make more sense to make the denominator here the encounters.

**Jill Shuemaker**

Anyone have any comments on that? That's the second measure and that would be the denominator. Right now, it's the number of patients with an encounter.

**Sasha TerMaat**

I think we actually recommended changing both of the denominators and numerators. In this case, we went from individuals with an encounter to just encounters in the denominator. And in measure 1, our suggestion was to go from number of individuals with an immunization administered to just number of immunizations administered.





**Jill Shuemaker**

Any comments on that? Steve?

**Steve Waldren**

I think I'm okay with Measure 2 saying it's encounter. And I think it's going to be a little vague in regards to what it truly means, but I think it gives us a good directional of where things are going in regards to getting that history and doesn't get us to have to spend a lot of our complexity tokens to understand should that encounter actually been -- I like that. I guess I'm concerned with changing the denominator of number one. But maybe some clarity for the folks. Do immunization registries in general allow for a bulk upload? Because I think kids that potentially get two or three at a time, is that one submission up to the registry or is that a submission for each immunization as a single entry?

**Sasha TerMaat**

That was actually part of what we talked through. I think there's two concepts here. One is how do we report it and how is it transmitted. Transmission can vary, bulk uploads are common. But I think what we want to measure is if a child got, in the course of one reporting period which might be a year, if they received 10 different immunizations as written, we are going to report either zero or one or one of one, because either the patient had it sent or they didn't. But I think what we were feeling was more meaningful was to say if the child received 10 immunizations, to report maybe 9 of 10 because there could be differentiation, even within that one patient's immunization, that would be more useful to understand.

**Steve Waldren**

I guess I misunderstood the numerator would be the actual immunization.

**Bryant Thomas Karras**

Exactly. And I think otherwise we'd end up with Measure 1 would have a larger numerator than denominator, which would be --

**Sasha TerMaat**

Weird.

**Bryant Thomas Karras**

Really weird. It should be larger than the numerator if kids are getting more just the COVID vaccine. They should be getting all their vaccines. I think that's what we need to recall is that there are multiple different VXUs that are going out the door from a given clinic. If Jill will permit, I'll read Mary Beth's comments.

**Jill Shuemaker**

Yeah, go ahead.

**Bryant Thomas Karras**

"So, some EHR EMRs send multiple administration immunizations in an HL7 message, some send single messages for each immunization, but in either case we support measuring doses rather than individuals." So, I think that my hope would be that even for those bulk transmissions, the tallying of what the payload is of those bulk messages would still be able to be to report the total number of doses contained and successfully received by public health.

**Jill Shuemaker**

We have Zahid said in the comment that he agrees with the vaccine administered in the denominator. And then Steven Lane has his hand up. Go ahead, Steven.

**Steven Lane**





I'm curious in general, and maybe you covered it and I spaced out, but why would we want to look at immunization doses as opposed to individuals who had their immunizations reported? I thought that's where the suggested measure started was individuals who had immunization data reported. You know, when we're comparing across the HRs which is the point, we are not trying to fix public health reporting right now. We're trying to report EHRs and capability to compare and contrast, it seems we could keep it simply to the level of the individual who had at least an immunization reported in a year that they received at least one immunization. I'm just trying to keep it simpler.

**Sasha TerMaat**

My question, Steven, was just if someone had nine of 10 of their immunizations reported, do we report it as zero or one. And as we were prepping, we realized it wasn't clear to us whether we preferred to see that as zero because only nine of 10 were reported or as one because at least one was reported. And it seems like knowing nine of 10 were reported was more useful as a number than either zero or one for the individual and that led us that direction.

**Steven Lane**

And I guess my response would simply be if we're evaluating the EMRs, the product, which is what we're here to do, the details for a given individual of whether all of them could be reported, whether all were successfully reported, et cetera, those are local issues. They're how they configured the system and how the jurisdiction is doing things, et cetera. It doesn't seem to me it reflects on the EHR the fact that a patient who received at least one immunization in the reporting period had at least one immunization successfully reported to the registry. And again, I'm just thinking about keeping it simple, that's all.

**Bryant Thomas Karras**

I think, Steven, I appreciate where you're going and I actually at one point was thinking along the lines of could we use this measure to identify inequities in immunization delivery by stratifying it by person and then stratifying those persons by race and ethnicity but backed off from that because perhaps that measure is better assessed in other components of the reporting program. I think that trying to think about how this data would be used to evaluate performance of EHRs by vaccine or by administration, to me, makes a lot more sense, because if you see any drop off, I mean ideally everybody will be at 100%, every vaccine that's delivered gets reported to public health. And if we start to see drop offs in a given vendor or in a given jurisdiction, it may be an indication that there's a work process gap or flaw, that a new vaccine has been delivered and there was no capability in that EMR to select that vaccine, for example, so it was still given and recorded but wasn't able to be transmitted. It will be interesting to see how that is teased out.

**Jill Shumaker**

Seems like we still have more discussion on this before we can make a recommendation. Any other comments before we move on to the next item? Bryant, why don't you and Sasha move to the next part of the evaluation.

**Sasha TerMaat**

I think we actually want to go up to the reporting frequency and look back period.

**Bryant Thomas Karras**

Back in the spreadsheet. I think that was the last of our dot points, Jill, in the discussion questions.

**Sasha TerMaat**

We had some conversation also about how frequently should this measure be reported and what would be the look back period. The consensus in our recommendation to the group here is that we'll probably want a consistent reporting frequency across all the measures. Kind of from the EHR developer perspective, it seems strange to me if you had an EHR reporting program and you reported some measures on different frequencies than the other measures. So, I'm kind of making







maybe a global assumption that if the program is going to involve reporting annually or twice annually, that that would be the case across the measures. The look back period, there was some interest in having it be at least 12 months so that the seasonal impact of some vaccination schedules would be accommodated in a way that it might not if we only reported, for example, for one quarter. But also with look back period, there's a consideration that the longer the look back period, the more processing power required from the organizations where the data collection is happening and it might be the most judicious to limit to 12 months rather than trying to do a 24-month look back period.

**Jill Shuemaker**

Zahid, has a comment

**Zahid Butt**

Can you hear me?

**Jill Shuemaker**

Go ahead, Zahid.

**Zahid Butt**

Thank you, I was muted. So, I think if the denominator were a patient, I would suggest that the look back period became important, but if the denominator turns out to be just the vaccine administered and the numerator is the reporting of it, I'm not even sure if the look back period would add any value but it would just add more complexity.

**Sasha TerMaat**

Yes, if it's administrations, I think the shorter periods would be the same, in essence.

**Zahid Butt**

I mean, you're basically counting the number of administrations and seeing how many of those were reported. So, whatever was done within a reporting period should be the denominator.

**Bryant Thomas Karras**

Say, for example, a primary care clinic has only adult patients and the only vaccines they give are seasonal flu. They pick their reporting period to be July through September, when next year's vaccine isn't available yet, their denominator and numerator are going to be zero and zero. A quarter wouldn't work. We'd need a year or longer.

**Zahid Butt**

Maybe then a yearly reporting period would make sense.

**Bryant Thomas Karras**

Yeah, that's why we're suggesting that.

**Zahid Butt**

But if it's a year reporting period, it should cover most of those scenarios. But what I'm talking about is the look back period, because you could have a one-year, two-year look back period in either case, and I'm proposing for discussion that if the denominator were a patient, I would understand that you would want to know if a patient got vaccinated in the previous 12 months, but here we are tagging it to the administrations and seeing how many of those got transmitted.

**Sasha TerMaat**

I agree. I think if we have a denominator of administration, we don't need to look back beyond the reporting period at all. It would just be administration in the reporting period.





**Bryant Thomas Karras**

For one year, yeah.

**Sasha TerMaat**

Yep.

**Bryant Thomas Karras**

It's still a look back. It's a look back for the previous 12 months.

**Sasha TerMaat**

In the quality reporting world, a look back actually goes prior to the reporting period in question. So, the reporting period we're thinking of is 12 months, like January 1, 2021 to December 31, 2021. But then in, say, March of 2022, we're gathering data for the 2021 reporting period but we are not, if we're just looking at administrations in 2021, looking back to sometime in 2020. But some quality measures do that, which is I think where the concept of a look back comes in, but to Zahid's excellent point, I don't think we're actually proposing a look back here. That is a nice way to conserve complexity tokens.

**Jill Shuemaker**

Anyone disagree with that? Should we make that a recommendation? That would be the vaccine administered is the denominator.

**Bryant Thomas Karras**

I'm okay with that. As long as the look back effectively becomes looking at last year's report, not having to do a technical repeat look back.

**Sasha TerMaat**

Correct.

**Jill Shuemaker**

All right.

**Bryant Thomas Karras**

Thanks for teaching me, Sasha, about the ontological definition of look back in this situation.

**Sasha TerMaat**

Thank you, Zahid for helping us preserve our tokens.

**Bryant Thomas Karras**

How many tokens do we have, Sasha?

**Sasha TerMaat**

Let me count them.

**Jill Shuemaker**

Anything else you have in your document?

**Sasha TerMaat**

I think we've covered the majority of what we had discussed in our prep meeting between Bryant and I and immunization experts. There was some discussion throughout, which you've probably heard in our repeated comments about tokens, about the feasibility of the various permutations of the measures and some of the stratifications that were there. One of our priorities, obviously, would be to make it as low burden as possible on the healthcare organizations whose data would be necessary to be gathered. But some of the feasibility, I think, will have to be assessed once we





understand the final proposed measure.

We also talked about some of the interpretation challenges because there's certainly ways in which the measures will not reflect on the system doing the reporting. One of the examples of that was that if an immunization registry has a downtime or is misconfigured in some fashion, that might result in a large number of unsuccessful messages going out from the EHR or not getting query responses back from the registry, but wouldn't, of course, reflect on the EHR submitting that data at all. So, I think a lot of that will have to be understood when analyzing the data.

**Jill Shuemaker**

And Kathy, I think Bryant is wanting to scroll up.

**Bryant Thomas Karras**

I wanted to point out to the other task force members that we made a change in reporting Measure 3 here to make this immunization query and response, to neutralize that some immunization registries, it's forecasting, some immunization registries it's history, and some it's both. You can commingle that both of those would be successful demonstration of that bidirectional capability with your immunization registry.

**Steven Lane**

I agree, Bryant, because there again, to differentiate would be to essentially attribute to the EHR product different functionality that exists at the level in the registry.

**Bryant Thomas Karras**

It originally said history as the header here. We changed that. Or forecasting, I think it said, as the header here, and we changed it to query and response, if everybody's okay with that.

**Jill Shumaker**

Any comments? Okay. Bryant and Sasha, do you have any other recommendations?

**Bryant Thomas Karras**

I want to defer the remainder of my time to public comments and see if my colleagues from immunization registry would like to chime in. I do want to say that, and I made this comment in our opening session, I think that, and I want to remind my task force members or colleagues that public health is not solely immunization delivery. And I'm hopeful that we'll have time in our future sessions to address some of the other draft measures that were considered. I think given the task force recommendations from the public health data systems task force needing to prioritize and elevate gaps that were seen in individual EMR systems and some of the optional public health measures that we have an opportunity here to really advance public health by highlighting and using as a tracking capability our progress and implementation of some of the other public health measures. I'm happy we're getting vaccine across the line first.

**Jill Shuemaker**

Thank you, Bryant, and thank you, Sasha. Are there any task members that have points that Sasha or Bryant didn't bring up that you would like to discuss? All right. Hearing none, can we bring up the document of what we discussed, the recommendations, or those that are still under consideration? Okay.

**Sasha TerMaat**

I used track changes in here for what I thought we agreed upon or were recommending for further discussion but please do encourage the rest of the task force to suggest edits if I didn't capture something correctly.

**Jill Shuemaker**





Yes, is that Sasha speaking?

**Sasha TerMaat**

Yes.

**Jill Shuemaker**

Sasha, do you want to go ahead and present this, the agreed-upon and recommendations.

**Sasha TerMaat**

Yeah, let's scroll up to measure one first, actually. It sounded like we had consensus that changing the denominator of measure one to number of immunizations administered was a recommendation we would make and that we would suggest the numerator of measure one be the number of administrations whose information was electronically submitted to a registry. One of the reasons for that, the third bullet is not really a recommendation, it's a rationale, but would help address the confusion with the numerator being larger than the denominator. We talked about stratification in the fourth bullet, indicating that stratification could be by the registry submitted to, which avoids some of the complexity of stratifying by state and actually gets more granular information about registry.

One of our goals overall was to minimize burden on provider organizations and data collection and we suggested the same reported frequency as the other measures in the program, annually, 12-month reporting period, no look back. We acknowledge that there may need to be changes to data use agreements to be able to report this data. We'd have to clearly specify any stratifications that were going to be included and stratifications are possible but we would probably want further conversation about where to prioritize to invest that complexity. And then on to measure two here. A lot of this is the same. Again, we have the same goal of minimizing burden on provider organizations for data collection. We suggested the denominator be number of encounters. As with the patient access measures that are based on encounters, we would need a definition with CPT and SNOMED codes. The numerator of measure two would be the number of query responses from the IIS received. Again, one of the rationales for updating this is to avoid the confusion of the numerator being larger than the denominator and we had the same look back recommendation on measure two.

For further discussion we had the same data use consideration about agreements, stratifications again would have to be clearly defined and we'd have to determine where it was most valuable to us to invest in that added complexity. I'll get rid of all the green.

**Jill Shuemaker**

Thanks, Sasha, and thank you, Bryant, for presenting this. We are going to pull this together and we'll be sending this out to the group to look at. And you can continue to have your feedback captured there. I want to allow enough time for our public discussion, but Bryant you had your hand up. Did you have another comment before we move to public comments?

**Bryant Thomas Karras**

Just going back, I want to make sure I made it clear. One of the things we discussed in preparation is making sure that it's not just the submission but the successful submission, which may involve tallying acknowledgment messages coming back from the immunization registry identifying successful error free chance of submission. I'll edit that in the document.

**Jill Shuemaker**

Thanks, Bryant. All right. So, now I think we're a little bit early but we wanted to allow enough time, because it sounded like we had a few for public comment so I'm going to turn that over for public comments.





## Public Comment (01:13:41)

### **Mike Berry**

Thank you, Jill, and great discussion everyone. Let's pause here and operator can we open up the line for public comments?

### **Operator**

Yes, if you would like to make a comment, please press star one on your telephone keypad. A confirmation tone will indicate your line is in queue. You may press star two if you would like to remove your line from the queue and for participants using speaker equipment it may be necessary to pick up your handset before pressing the star keys. Our first comment is from Mary Beth Carrillo, please proceed.

### **Mary Beth Kurilo**

Thank you so much, can everyone hear me okay?

### **Mike Berry**

Yes.

### **Mary Beth Kurilo**

Great. First off, from the American Immunization Registry perspective, we just want to say thank you for considering this measure. We recognize all public health measures are important, given what we've all experienced the last 18 months of the pandemic, I think immunization really bubbles to the surface as something we need to pay attention to. I support all the conversation and thanks finish letting me jump in via the chat window. I just want to really underscore that piece of successful administration of administered doses we want to make sure the message is coming across to the IIS are well configured. The IIS community has done a lot to make sure we're in alignment with standards for acknowledgment messages so we can send back if the message is inappropriately configured or inappropriately coded. We will do everything we can on our side to make sure those acknowledgement messages coming across are really meaningful and allow action on the part of either EHR or the provider if the message needs to be modified or resubmitted because of an error.

The other piece that I just want to emphasize is, and this is really more a forward look, if there's ever an opportunity to validate or better coordinate efforts and have some sort of validation from the IIS side, AIRA and our IIS members are more than happy to try to coordinate that. We've done a lot of work through our immunization integration program with Him to really look at interoperability from all sides, IIS, EHR, HIEs, clinicians. So, down the road if there's an opportunity or interest in validating some of this information from the IIS side, we'd be happy to partner on that. I know there are other folks who want to weigh in. I just want to say thank you so much for the opportunity to take part and looking forward to seeing where this goes.

### **Operator**

No further comments at this time.

### **Mike Berry**

Thank you. Jill?

## Final Remarks (01:16:24)

### **Jill Shuemaker**

Thank you, everyone. I appreciate the discussion and thank you again, Sasha and Bryant, and everyone's contributions. Great discussion. Raj, any comments, final comments from you?





**Raj Ratwani**

No. I think this is a lot of great progress here. I appreciate everybody staying really engaged. And I know we have a lot to do here on the task force. I know there was one open question about one of the potential future measures or optional measures and ONC Urban Team please help me with the terminology here. I believe we need a couple volunteers to take that one on if possible.

**Gary Ozanich**

This is Gary Ozanich. The data quality measure, which we believe is cross-cutting across at least the first two we discussed thus far, it is listed as a future measure under the standards domain.

**Sasha TerMaat**

It's on Slide 30 if you want to go to that slide.

**Raj Ratwani**

Maybe we can jump to that quickly. We do want to make sure that this task force workgroup is providing recommendations on that particular measure. I recognize that this is another one that we have to take on, but this is critically important work. Any volunteers for folks that would want to take this one on?

**Sasha TerMaat**

Sorry. I'm just looking at the request for public feedback. What page is this on?

**Raj Ratwani**

I don't have that information.

**Sasha TerMaat**

I think I found it. I think it's 13. Does that sound right?

**Zahid Butt**

Sasha, you're going to have to use all your tokens for this one.

**Sasha TerMaat**

Yeah, this one might require infinite tokens.

**Bryant Thomas Karras**

Jill and Raj, would this measure be an ideal placeholder for the demographic completeness capabilities that we've identified as being lacking in public health reporting? That we don't have race and ethnicity, we don't have complete names, and missing from the list of potential data elements here and the others question mark would be correctly formatted address and phone number, both home, cell, and potentially work. We're getting, in many cases, still, to this day, incomplete demographics reported to public health. It makes it really hard to do our job and this element could do that, I'd be happy to volunteer if that's appropriate.

**Raj Ratwani**

To me, it makes sense to bring that thinking in here, for sure. Because this is a future measure, I take it that this has not been a top priority in the prioritization scheme here. I see our discussion at the last meeting on the importance of capturing social demographic information, and from that what emerged to me is it is a high priority. I think just figuring out how these two things intersect I think will be important. Bryant, if you're willing to take this one on, I realize it's yet another one for you, that would be fantastic. If there's a partner in crime that wants to join Bryant, that would be helpful

**Sasha TerMaat**

What call are we talking about this one on?





**Raj Ratwani**

Great question. We may need to squeeze this in with one of the others.

**Bryant Thomas Karras**

The further in the summer, the better. This next couple week sis a little pressured with HIMSSS and CDC grant deadlines.

**Raj Ratwani**

I think what we can try and do is put it two weeks. While we don't circle back on the timing of this. I know that will impact who could potentially take it on. But why don't we circle back to the work group with when we think we can fit this in the schedule. And we can see if that fits.

**Sasha TerMaat**

I could probably team up with Bryant again if that's useful but would want to make sure I was able to be on the call on the day we are discussing it, of course.

**Raj Ratwani**

If you both are willing to take it on, could you do it on one of the next two, just knowing that we have the meeting set up here on the fifth or the 12<sup>th</sup>?

**Bryant Thomas Karras**

That's going to be difficult with preparation with HIMSS. We're watching them [inaudible] [01:21:31] doing two different interoperability showcase demonstrations.

**Sasha TerMaat**

I could do the 12. I also could do the 19<sup>th</sup>. So, it sounds like it's up to Bryant.

**Bryant Thomas Karras**

19<sup>th</sup> would be much better for me.

**Raj Ratwani**

Jill, do you think we could slip that in on the 19<sup>th</sup>?

**Jill Shuemaker**

Yeah, I think we could do that. This highlights and impacts all the measures and so far the discussion that's been brought up about what additional information needs to be captured. I think it sits well.

**Raj Ratwani**

My only worry if we do that is that just puts us right against when we want to have all those recommendations. We want to have that report full review by the whole group. I have a feeling this is going to be a meaty one. If we try to tackle it on the 12<sup>th</sup>, Sasha, you said you're able, is that right?

**Sasha TerMaat**

Yeah.

**Raj Ratwani**

Is there anyone else that would be willing to join Sasha on the 12<sup>th</sup>? Bryant we could get your directed feedback on this during that review cycle.

**Bryant Thomas Karras**

I think I'm actually on stage for a breakfast session at HIMSS on the 12<sup>th</sup>. I may not be able to do both.





**Raj Ratwani**

No, I understand. I think what we're looking for here is if there's another task force member that would join Sasha to tackle this one, present on the 12<sup>th</sup>, and we can brief Bryant when he has time to make sure that we get his valuable feedback.

**Zahid Butt**

This is Zahid. I can volunteer.

**Raj Ratwani**

Perfect. Thank you, Zahid. So, we have Zahid and Sasha for this particular measure. We'll get that into the schedule for August 12.

**Sasha TerMaat**

Sounds good.

**Raj Ratwani**

Thank you both so much.

**Zahid Butt**

Sasha, you're going to take the lead on this, right, still contact me, I guess, for anything?

**Sasha TerMaat**

Yes. I'll send you a meeting request.

**Zahid Butt**

Perfect. Thank you.

**Raj Ratwani**

Wonderful. Thank you both. Thank you to the rest of the task force members, ONC and Urban and folks from the public that joined. We appreciate it. Same time, same place next week, I believe.

**Jill Shuemaker**

Thank you, everyone.

**Adjourn (01:23:52)**

