Interoperability Standards
Priorities (ISP) Task Force

Transcript
December 11, 2018
Virtual Meeting

SPEAKERS

Name	Organization	
Kensaku Kawamoto (Co-Chair)	University of Utah	Co-Chair
Steven Lane (Co-Chair)	Sutter Health	Co-Chair
Andrew Truscott	Accenture	ISP Task Force Member
Anil Jain	IBM Watson Health	ISP Task Force Member
Arien Malec	Change Healthcare	ISP Task Force Member
Clement McDonald	National Library of Medicine	ISP Task Force Member
Cynthia Fisher	WaterRev, LLC	ISP Task Force Member
David McCallie	Cerner	ISP Task Force Member
Edward Juhn	Blue Shield of California	ISP Task Force Member
Leslie Lenert	Medical University of South Carolina	ISP Task Force Member
Ming Jack Po	Google	ISP Task Force Member
Raj Ratwani	MedStar Health	ISP Task Force Member
Ram Sriram	NIST	ISP Task Force Member
Ricky Bloomfield	Apple	ISP Task Force Member
Sasha TerMaat	EPIC	ISP Task Force Member
Scott Weingarten	Cedars-Sinai and Stanson Health	ISP Task Force Member
Tamer Fakhouri	One Medical	ISP Task Force Member
Terrence O'Malley	Massachusetts General Hospital	ISP Task Force Member
Tina Esposito	Advocate Health Care	ISP Task Force Member
Valerie Grey	New York eHealth Collaborative	ISP Task Force Member
Victor Lee	Clinical Architecture	ISP Task Force Member
Lauren Richie	Office of the National Coordinator	Designated Federal Officer
Brett Marquard	WaveOne Associates	Presenter

Operator
All lines are now bridged.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Thank you. Good morning, everyone. Welcome to the ISP Task Force meeting. We have yet another interesting and exciting agenda for us today with another presentation the task force regarding FHIR. So, with that, we will go ahead and get started, starting with roll call. Ken Kawamoto?

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Here.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Steven Lane?

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Good morning.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Anil Jain?

Anil Jain -- IBM Watson Health -- ISP Task Force Member
Good morning.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Arien Malec?

Unknown Speaker
Hang on.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Andy Truscott? Was that someone that just said…? Okay. Clem McDonald? No Clem? Cynthia Fisher?

Cynthia Fisher -- WaterRev, LLC -- ISP Task Force Member
Yes.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Thank you. David McCallie did indicate he was going to be absent today. Edward Juhn?

Edward Juhn -- Blue Shield of California -- ISP Task Force Member
Here.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Terry O'Malley?

Terrence O'Malley -- Massachusetts General Hospital -- ISP Task Force Member
Here.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Leslie Lenert? Not yet? Jack Po? No? Okay. Raj Ratwani?

Raj Ratwani -- MedStar Health -- ISP Task Force Member
Good morning. I'm here.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Ram Sriram?

Ram Sriram -- NIST -- ISP Task Force Member
I am here.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Ricky Bloomfield?

Ricky Bloomfield -- Apple -- ISP Task Force Member
Good morning. I'm here.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Sasha TerMaat?

Sasha TerMaat -- EPIC -- ISP Task Force Member
Good morning.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Scott Weingarten? Not yet? Cheryl Turney? Tamer Fakhouri?

Tamer Fakhouri -- One Medical -- ISP Task Force Member
Good morning. I'm here.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Good morning. Tina Esposito? Valerie Grey also indicated she was going to be absent. And, Victor Lee? Okay. We'll circle back to roll call later in the call. With that, I will now turn it over to our co-chairs first for any opening remarks before we hand it over to Brett.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Excellent. Thank you so much and thank you, everyone, for joining us this morning. Ken, are you on audio?

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
I am. Good morning.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Do you want to kick this off?

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Sure. So, for today, we have two main agenda items. First, we've been talking a lot about direct-based referrals and closed-loop communications, and we're going to invite a presentation on how FHIR could potentially operate in this area because we've been talking about whether there may be a potential future path using FHIR, and then, we will be diving into draft recommendations in this area. Steven, anything else?

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
No, that's great. We really want to thank Brett Marquard for coming and joining us and preparing a presentation on FHIR. We had a chance to meet with Brett and explain where the task force has been. Brett's visited with us before, and he's very familiar with this space. Brett, why don't we let you go ahead?

Brett Marquard -- WaveOne Associates -- Presenter
Thank you, Steven, and thank you, Ken, and thank you all for having me today. My name is Brett Marquard. I think I've met a few of you. My background is in interface development implementation. I've been spending a lot of time doing standards development lately and supporting the Argonaut data query guys. I still do a little bit of work with consolidating CDAs, really with an effort to make standards implementable, not just for the experts, but for folks who are new to the community.

So, today, I'll talk about the state of FHIR workflow in the overall FHIR specifications. You can hop to the next slide. I actually pulled – it's funny. For folks who actively track FHIR as a project, it's a very large specification, so we all work on our different pieces. In preparation for today, I spoke with several folks on the FHIR core team to get their perspective on FHIR workflow, and I'm trying to boil that down to the key pieces that the folks on the call would be interested in. I couldn't help but pull out the existing definitions and specifications.

So, from FHIR workflow, it's intended to cover a wide swath. It covers orders, care protocols, referrals, care coordination within the inpatient setting… When you think about FHIR workflow, what the base specification is attempting to do is any really complex – or even simple – coordination across top systems. And so, it's not just referrals, but it's much broader than that.

To support this FHIR workflow vision – if you want to hop to the next slide – you'll see that there are lots of different FHIR resources. The way the developers have grouped the different

workflow resources – for folks who know the FHIR community, Lloyd McKenzie has been one of the lead authors in this area – is in three chunks. The first is things that can happen in a time-independent manner. Whether it's a questionnaire or a measure, that's one block of resources. The other, which I think is interesting to this group, is the idea of an actual request, where you're asking someone to do a specific thing like an appointment, a referral request – actually, for folks who spend lot of time with specs, the name "referral request" changed recently to "service request," so it's a little bit more generic than referrals. And then, there's a whole suite of events, which could be done because of a request.

So, many of these are not necessarily specific – wouldn't be considered workflow-only resources, but they relate to workflow. So, calendar, observations – several things that exist in systems that already work today. So, these three classes of resources are what make up the workflow portion of the specifications. I know folks on the phone – if I were listening to this, I'd think, "Jeez, let's get to the referral portion of this. What's all this high-level workflow stuff?"

I think what's important – head to the next slide – in talking to the standards community is there has been talk about workflow for over two years, and what the members have developed is this new area of specification called "workflow," with these resource patterns of definition requests and events, and I couldn't help but drop in a picture of – I hope a few of us got away this summer to a beach somewhere. I think the state of FHIR workflow development from the base specification is still looking out and saying, "We have a lot of problems to solve. Here are definitely some pieces we need." But, it hasn't necessarily zoomed in to solve some of the specific use cases.

And, I need to be careful because in terms of some of the order request workflows, there are a few different countries that have done some pilot work around that, but in terms of the United States having an implementation guide that says, "If you're going to solve this workflow pattern – such as the referrals – here's how you piece together the FHIR resources." It doesn't exist today, or at least not that I've been able to define in speaking with Graham, Lloyd, and a few other folks in the U.S. There has been some experimentation, but definitely not in the sense of true pilots or some of the connect-a-thons.

And so, I thought what would be interesting to this group is to step back and think about some of – I think when folks use the term "FHIR," we use it in this broad sense of what the future looks like, not necessarily exactly what the current exact FHIR pieces support today, but what is the opportunity of the FHIR resource paradigm and using the rest to provide us? I think are a few opportunities for this community to think about.

The first – hop to the next slide – is for folks who follow the Argonaut project, in 2017, there was an Argonaut effort to develop a scheduling implementation guide. And so, if you were to pop open this guide, you would see there's guidance on how, for a client application or an app to request the available schedule from a server, reserve a slot, and then to book that appointment – that's one component that could fit into the referral workflow.

Another part – there is an Argonaut provider directory guide that provides the capability to

look up a provider and their location. Some of those components have been picked up by the Sequoia and Carequality effort. Note that this provider directory isn't out there in an existing form with all providers in it. It's just a framework for how a provider directory runs. There are some pilots of it and some implementation today.

Another one, which I suspect a few folks are familiar with FHIR will recognize, is CDS Hooks, which is kind of on the edge of FHIR specification. Clinical Decision Support Hooks provides a standard way to invoke clinical decision support directly within a workflow, and also, if folks on the phone either have EHRs or are very familiar with all the different spots where you could potentially hook in a provider trigger event to reach out to an external service, CDS Hooks today has just a couple example hooks with patient view, medication prescribed, but there are likely several more that will come out in 2019. This specification, CDS Hooks, will be published in – it did actually go through an HL7 ballot and will be published very soon, so that's one piece of the puzzle that should be considered.

Another one out there that was an Argonaut effort this year is the questionnaire implementation guide. It's the idea that maybe within a referral workflow, we need additional information from the patient. This guide gives guidance on how a questionnaire could be provided to a patient or provider and end user to fill different information.

So, these are things that – in the existing standards today, you can see CDA, or V2, or Direct – are fairly complex things that the new area of FHIR allows us to do. It cracks things open in a way that we wouldn't be able to do with existing standards. But, even with these, I don't think the full referral workflow that you guys have been tasked with is fully solved yet. And so, as I thought through this over the last couple of weeks – "What are the components of the referral workflow that, regardless of the technology or standards we use, are there for everyone?"

Hop to the next slide. I think there are some pretty common things, and it sounds like – Steven and Ken shared some of your thoughts with me and some of your draft work, and I suspect these fit pretty closely with some of the thinking you had. But, for a system that initiates your referrals, there is a real opportunity to port the core things you must have for today and going into the future: The ability to initiate a referral request to an existing system. When you initiate that request, you have to make sure you include patient identifiers, referral identifies, and appropriate clinical information.

Now, in parentheses, I put "CCDA FHIR." In CCDA, some systems are very sophisticated in terms of processing, but not all of them are, and some of them are hoping to look for FHIR resources, so there's an opportunity within that to provide clinical information. It could be some combination of those, or maybe there's an access to help them provide it to the receiving system, which then could retrieve the resources they need for proxy referral.

Another requirement in the initiator is they need to be able to receive updates from the external system to say the referral was declined, accepted, in progress, or complete. They need the ability to initiate a cancellation message. It's possible the provider places the referral and decides they sent it to wrong location or the patient no longer needs to have this

particular referral, and so, the initiator needs to be able to cancel it.

And then, lastly, at the end of the referral workflow, when the consult is complete, the referral initiator needs to be able to receive the completion of the referral and any of the clinical information that goes with it, and be able to process it. There are more things that could be added, but these are the core that bubbled up, and these bubbled up in conversations, going through notes with Graham, and also looking at 360X as a specification of what requirements were included, since there was a lot of thought put into 360X that would carry to any kind of future referral workflow.

The last couple here our initiating systems should support – which may not be obvious because they're not necessarily right in the workflow – if there's no response to the referral request, or maybe if the referral outcome was not sent back in a timely manner, the initiating system would want to notify the user that there's additional work or follow-up that needs to be done. So, these are some of the core things that came up on the referral that kept bubbling up.

On the receiver side – hop to the next slide – there are some other common capabilities. It needs to be able to receive the request and it needs to be able to process the provider to provide a patient referral identifier. That referral identifier is very important because it provides a link between the two system. It's got to be able to receive cancel messages – these are complementary to the initiator – support cancel messages, support statuses, and at the very end, support sending referral outcomes and corresponding clinical information, or making it available for the initiating system to retrieve. A bonus thing that would be nice up front is that the receiving system would be able to provide scheduling information and allow external scheduling without having to make phone calls or additional communication to make that happen.

So, as I thought through this, these are things I thought it boiled down to, and I know these are not FHIR-specific, but FHIR could support these things, as well as other technologies, but again, these are the core things that, regardless of what you guys select, these capabilities will need to be present.

Hop forward. The industry today – I think folks have a pretty good state if they've been looking at the presentations we've had the last several weeks – go to the next slide. I think 360X support – I've seen Dr. Miller and Vassil present 360X a few different times this year, and they've made a lot of good progress and put a lot of really good thought into it in terms of picking up the existing components that are out there today to solve a real problem. It's a fairly complicated specification to cover base referral requirements.

I think it is interesting in that it does focus on the existing standards, and I think that's a good thing, but it doesn't necessarily – it does absolutely move the ball forward, but in terms of making it easier for entry for other folks, I think there are some complexities here that new folks will find difficult to pick up and plug in to new applications.

In terms of FHIR workflow experience, I think there's even less experience with that today. I

think the components of FHIR workflow – I would hear them say, "Let's call scheduling part of workflow." I would say, "Yeah, we've got some experience there. I know some major EHR vendors who implemented the Argonaut scheduling." If you want to talk about CDS folks, some major EHRs implemented that. That's a really positive thing. I think I would lump those in with FHIR workflow to say we've made progress.

But, in terms of some of the very specific FHIR resource tasks and resource subscriptions, we have a ways to go, and I think more importantly with FHIR, it's a very powerful specification in terms of allowing new entrants and allowing new workflows, but in terms of our experiences with just piloting FHIR for referral, I think we have an opportunity here to either encourage Argonaut or another community to say we think we have the pieces to support a robust referral exchange, but we really need to do some piloting to learn how to do it. I think today, if we were to say, "Hey, use FHIR for referral management and referral exchange," we'd get multiple different things, and it wouldn't be the solution that makes providers' and patients' life better the way we'd like it to be.

So, that's a quick view. In terms of opportunity – hop one more slide – I think that continuing the pilot – I'm always amazed how much we learn through piloting specific things. For folks who participate in the Argonaut community, we've always been very careful to not get too far ahead in specification development and to make sure that we're doing pilots along the way to show our work to the group on clinical notes. I think we started in April of this year, and I thought we were going to be done by May, and we went to the May connect-a-thon and learned a whole bunch of things.

Then, I thought we'd be done by July, and in the middle of July, there were some really good questions asked about imaging reports, and then we had a connect-a-thon in September, and continually iterating with implementers, community standards developers, and end users to make sure we get the requirements nailed down is so important. And so, I think for referrals, there's an opportunity here in 2019 with the set of new pilots and trying to set the core requirements of what each system must support to be able to encourage these pilots. So, it's a little bit more than FHIR, maybe a little more than what you bargained for, but, Steven and Ken, that's what I've got for you today.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Awesome.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Thank you so much, Brett. I think that was really what we were looking for. There have been a number of task force members, not many of whom are on the call today, who just raised the important question of how we separate in our minds the functionality that we think is important from the technology that's going to support it, and as we go through our draft recommendations, we're going to try to see if we've captured that appropriately.

What I hear you saying is that FHIR is coming along, it has tools that could potentially support some of these more complex workflows of closed-loop referrals and care coordination, but as you say, there aren't IGs, there aren't pilots – we have a long ways to go. There's a lot of

promise there, but 360X has looked more deeply into the specific workflow requirements of this use case, leveraged more well-established technologies, and even that, as we say, hasn't really been piloted, but it's ahead in the reliability of the underlying functions. So, we'll give everyone a chance to chime in, and I do hope that folks on the task force raise their hand. Especially, I think Ricky has raised some issues hear, and we do want to hear what people think.

So, one other comment that we heard – it was from David McCallie and some other folks, Les, I think – I don't know if Les is with us today – the question of timeliness, the question of whether a system like 360X that's built on Direct could manage the back and forth that's required to manage something like referrals or prior authorization, and if not, whether FHIR – at least, theoretically – has some advantages in terms of real-time processing, or whether one could imagine that those kinds of workflows that require a request, a response, and more data back and forth could be done based on either technology, or if there's an underlying technological limitation that makes one or the other perhaps more optimized for those kinds of workflows. I just thought I'd throw that out. We'll open it up to hand-raisers.

Brett Marquard -- WaveOne Associates -- Presenter
Steven, I think it's interesting that you mentioned – to jump back on the maturity of 360X – I think it's correct. It's picking up existing standards and applying them, and it's done some really nice work, but I think the way – I read the spec when I talked to Vasil. I still think in terms of maturity, 360X is pretty new. There's a lot of specification writing and good detail, but in terms of real experience, I would have a hard time saying that it's leaps and bounds ahead of FHIR's ability to catch up or FHIR's IG in terms of the workflow. I think it could catch up very quickly. Yeah, there's a more detailed spec out there, but in terms of real experience, I think we're still pretty light.

And, in terms of new workflows like prior op – I don't know if Vasil can comment on how they've thought about with 360X. It's much easier for me to think about how prior op and other more complex workflows would plug into the FHIR framework because folks are already experimenting with how to do that than the direct point-to-point messaging framework. It's hard for me to get my – I can think of some ways it would be done, but the real pilots and the real future are moving to more of the FHIR-flexible framework, not one some of the existing Direct standards, but I'd love to be corrected by Vasil or someone else if I'm not aware of something.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Yeah, but I think that's – I think my understanding of where we are – I see Terry has his hand up. Terry, do you have a comment?

Terrence O'Malley -- Massachusetts General Hospital -- ISP Task Force Member
Yeah, it's actually another – it's a comment and a question for Brett. Brett, thanks so much. This is really great. Much appreciated. It seems to me that 360 is asking for a whole new set of capabilities that neither Direct nor FHIR has quite gotten to, and it's really sort of an air traffic controller function for clinical messaging for a purpose. So, the purpose might be a referral. It might be test results. It might be transition of care. It might be care coordination.

But, what we're really asking for is a module that says, "Yes, I will manage your message flow and make sure that it meets the specifications of your use case." Is anyone thinking about that? How would FHIR get to that if anyone wanted to get there? I'm just not sure where to go from that thought to moving things in that direction.

Brett Marquard -- WaveOne Associates -- Presenter
It's a fair question, Terry. I think it's funny – I'm trying to think of the best… The workflow that is being proposed by 360X with Direct and the various packaging – I would say I'm confident that you could write a FHIR specification that directly parallels the 360X specifications without too much trouble. When I say "parallels," I mean the same messaging framework in terms of maybe you could – gosh, someone's going to dislike this – include some of the FHIR resources within Direct or a different Direct communication protocol. FHIR could be repackaged and almost directly parallel the 360X flow.

Maybe that's – this is where I think – maybe that's some area that would benefit from having someone actually spec that out, and we could then debate a little bit about whether it's better to push FHIR on that two-parallel path or if there's a third path out there, which is where I keep thinking – I feel like the flexibility – sorry. When I read 360X, I think it is a great solution to our existing – all the vendors out there support it, we know everyone supports Direct, and folks are confident in the MCDA VQ support. Yeah, 360X could roll pretty fast, but in terms of new add-on capabilities, it's hard for me to see how those fit into the 360X framework.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Thanks. We have Ricky's hand up.

Ricky Bloomfield -- Apple -- ISP Task Force Member
Hi. Thanks, Brett, for the presentation. I think it's an excellent overview of the technologies here. The comment I wanted to make was related to steps forward for this. I think there's been a lot of technical work around it. In my view, one of the keys is going to be identifying a very narrow use case in parties who are willing to pilot it regardless of the technology because all of these areas of technology and workflows are so complicated that it's going to be a very iterative process of starting very small, very simple, and building out as there's more confidence. I don't think there is any more complicated area of health IT than workflow management because of the high degree of variability between health systems and between vendors, and so, this is most definitely not low-hanging fruit, so I just wanted to make that comment.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Thanks, Ricky. Any other comments?

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Brett, did you have any responses to my question about timeliness and whether one technology or another seems more appropriate to workflows that require back-and-forth communication and exchange of data? Did Brett go on mute? There we go.

Brett Marquard -- WaveOne Associates -- Presenter

No, I'm off mute, Steven. When I look at the standards that are in 360X, the easy answer – I'd love to say – I've worked with a ton of vendors. They all support Direct really well, they all support CCDA and V2 really well, so yeah, the timeliness of those standards should be pretty quick to roll out. But, my experience is the CCDA support – some of these things are – well, they support them. Do they support them well? I'm sorry for giving a longer answer than "Yeah, they may be quicker because folks are familiar with those." I think how well those are supported varies a bit. Ricky's comment about trying to take a very small bite that we can iterate on is the right thing to focus on.

And so, I would be very happy – we'd be very happy to see encouragement of both 360X development using the existing standards and something else. I think encouraging just one or the other would… Sorry. I think the components of 360X are out in the industry today and are readily available to use. In terms of consistent support, I think there's some variability there, but those are definitely out and the specification has more definition than anything else right now.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair   Okay, that's – Sasha has her hand up.

Sasha TerMaat -- EPIC -- ISP Task Force Member

I was just going to comment – I don't know if everyone saw it, but Vasil is attending the call today, but he's not a speaker, so he's been adding some commentary in response to some of the questions posed about 360X in the chat.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Do you want to represent those, Sasha?

Sasha TerMaat -- EPIC -- ISP Task Force Member

Sure. So, one of the comments is very similar to what several folks – Brett, Terry, and others – have said, which is that there's kind of a workflow change represented in 360X that's independent of what technology is used to accomplish the workflow, and that piloting 360X is maybe one of our closest paths to refining that workflow and determining what our next steps are from that perspective. I know piloting 360X is one of the next-step goals that has been discussed on previous calls. And then, Vasil is also adding a comment about the preop workflows, where they haven't necessarily made a technical decision yet on what standard would be used for those, so that is something that 360X is looking at next.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Great. All right. Well, again, Brett, thank you so much for joining us. Feel free to stay on if you like, or to hightail it to the next thing. But, what we wanted to do next was to transition to a review of the draft recommendations. Hopefully –

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer

Sorry to interrupt. I think we have one more question or comment from Clem.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Oh, Clem made it! Great.

Clement McDonald -- National Library of Medicine -- ISP Task Force Member
It's a short one. This 360X – is there a short guide for dummies for 360X or some document you could send out so we could get a quick overview of what it really is? The conversation was very interesting, but I couldn't judge what's good or what's bad because I don't know anything about the internals. So, if somebody has a whitepaper or overview they could mail out, it would be very appreciated.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
You mean over and above what was presented here a couple of meetings back?

Clement McDonald -- National Library of Medicine -- ISP Task Force Member
Yeah.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
There's a lot of detail posted on the HL7 website, but in terms of a separate PDF-level document, perhaps we can look to Vasil or Dr. Miller to try to if such a document exists. Dr. Miller just chimed in on the public chat they're working towards a 360X whitepaper in January, so Clem, maybe at this point, we will need to rely on our presentation and what's already on the website.

Clement McDonald -- National Library of Medicine -- ISP Task Force Member
Okay, I'll patiently wait for that. Thanks.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
All right. So, we wanted to turn our attention to the work that a number of us had done in an effort to bring together a set of recommendations, similar to what we've done with orders and results. We used a similar format, where we identified specific observations of the state of the world, recommendations, and started in on some policy levers for moving these recommendations forward. I'll acknowledge that with our first round of orders and results, Arien Malec did a lot of the heavy lifting in terms of suggesting policy levers based on his deep understanding of how things are done back in D.C., and we're looking forward to collaborating with him and others in terms of defining those.

So, I think that really, we can primarily focus on the observations and recommendations, and maybe that would actually make the display easier because I know it won't be long until Clem says, "Can you make that bigger?" So, yeah, that would be great. We can keep – you might even be able to go up a little bit in the zoom, or maybe that's something that I could do. Let me see if that helps. There we go. That will be a little bit easier for people to see.

So, what we wanted to do was walk through this. There's a lot here, and I do hope that

people had some time to review this. We invited comments from the task force over the past week, and I don't think that we got many. If people felt that they submitted comments that they don't see captured, do let us know. But, we wanted to go through this at a high level and see what people think, and then… Our timing is very tight, in fact. We are making a presentation to the HITAC on this work in just two days, so I have a lot of space cleared on this tomorrow, and I think so do Ken, Sarah, Lauren, and others, to tidy this up, but we wanted to go through the high-level recommendations and see if people feel like we're on the right track.

Again, similar to orders and results, this is a first draft that we will then be pulling together more formally, and then finalize it later in the year. With regard to the orders and results recommendations, at the end of our call today, we will be introducing you to the second draft of those based on the input that a number of folks have provided that we hope to review again, potentially at our next meeting. So, Ken or anyone else, any other comments before we dive into this?

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
No, I think it's consistent with what we've discussed today and what we've been discussing in the past few meetings, so hopefully, it'll resonate.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Great. So, again, please do raise your hands as we go so that we can get comments out there, but just starting with the observation – and, maybe what I'll do is actually extend this a little more laterally so that we can see the whole observation at once. There you go. Now, you can see the whole thing, and we'll go through that and the whole recommendation. Basically, we're identifying the challenge that referrals are hard, that they obviously are not leveraging available interoperability tools, and that there are a lot of consequences to that – that patients have more work to do, that the referrals are delayed, that specialists are not receiving the information they need, that information is not moving between systems, and that there's often an absence of closing the loop and getting the relevant information back to the referring providers.

So, this top section really tries to articulate in some detail the challenge of the current state, and then acknowledges 360X and the work that's being done there, how that works, and what it entails in terms of the standards that it's leveraging. It acknowledges the state of it – having been tested, but still not implemented – and then calls out, the fact that patient identity management is key, that a solution that has been introduced in 360X is the use of referral identifiers that allow a referral to be identified as it moves between systems. We acknowledge the importance of message context and the fact that we've heard about a couple of technical methodologies to represent that and that there's still work going on in the industry to sort those out, and then acknowledge, again, the work that's being done by FHIR.

So, there's a number of higher- and lower-level observations here that we call out, and we just wanted to see if people had any specific thoughts about this, how we've phrased it, and what we've included here before we move on to the associated recommendations. I don't

see any hands up. Can we at least get someone's vote that this seems reasonable? Because again, what we're trying to do is put together a lot of what we've discussed here as a set of draft recommendations from the task force.

Terrence O'Malley -- Massachusetts General Hospital -- ISP Task Force Member
Steven, this is Terry. I'll give you the vote. I'm wondering – just under the observations piece – it's a broad set of observations, and there are actually five or six different implications for each of those observations that you would do something. So, the 360X project is focused on the closed loop. The other issues are based on identification, the fact that the current system doesn't work very well… I don't know. In my mind, the solutions may be different enough or the connections may not be clear enough. It's only a comment, and it's not based on a lot of thought, but anyway, great start. I vote for it.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Okay. Well then, let's shift over one column to the recommendations. Again, I'm going to see if we can figure out how to get all those on one screen. Not quite, but we can make that a little wider, probably, and get it onto one screen based on the display we've got. Let me see how that works. Let me do the editing. There we go. All right, perfect. And, let me get one more little bit in here. Okay, good. We'll do what we can.

So, the recommendations in response to those specific observations were trying to capture a bit of what is really embedded in 360X – because we've said that that's important – and differentiating what is required by the requesting system and by the receiving system. So, going in and adding a bit of detail, really, to clarify what we are looking for because these minimum baseline requirements for HIT systems really have come out of the years of work that have gone into 360X, so we're taking those at face value without a lot of modification. We may or may not want to include that level of detail in our recommendations. I'd be interested in hearing people's thoughts about that.

We then go on to say that we, as a task force, recommend supporting pilots of the 360X methodology, using various EHR systems in various organizations, iterative enhancement based on real-world feedback, and then expansion of use cases, as we've discussed. The initial use case has been for ambulatory referral management, but there are clearly other referral transitions that we've identified as important.

And then, also, expansion of the data included – and here, again, this comes from the experience of the 360X working group in terms of their years of working on this and realizing what is next. So, the top part here is what we see as the baseline requirements and where it is felt that 360X itself should be going. And, I think as Brett was saying to us earlier, frankly, these functionalities can be instantiated in a 360X technology solution, or FHIR or other technologies, but again, this spells that out.

And then, we speak specifically about the challenge of message context. There are a couple of different representations of how message context should ideally be transmitted and shared between systems, so we want to suggest that the ONC encourage and support harmonizing of these. And then, it goes on to mention FHIR, as we've been discussing –

looking at FHIR-based approaches to support closed-loop referrals and care coordination messaging, and we call out in particular the Argonaut scheduling for external appointment creation, I think as Brett mentioned.

So, those are the recommendations that come out of our observations, and again, I'd like to pause there and get input. Does the group feel that we are on the right track here, that the recommendations map to the observations, and is this level of granularity appropriate? Is there something that should be added or perhaps removed from this?

Terrence O'Malley -- Massachusetts General Hospital -- ISP Task Force Member

This is Terry again. I take back my previous comment. I think this is a level of detail that really helps connect the observations with some potential solutions. So, I like this level of detail. Perhaps it might be helpful to expand the list of potential use cases, both with transitions, but also extended to lab request results, and perhaps ultimately to longitudinal care coordination or shared care.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

So, just to be clear, Terry – and again, the title of this segment or this area of focus has really been closed-loop referrals and care coordination, and we lumped labs and results in another section. I wonder if it makes sense to reference back to that, to add lab orders and results here… I want us to be able to have a body of recommendations that makes sense. I know we've talked about this a lot, but how to define these somewhat artificial boundaries between priority uses. So, I think that was where I thought we were trying to keep orders and results out of here and keep it more on referrals.

Clement McDonald -- National Library of Medicine -- ISP Task Force Member

Steve, this is Clem. I think there's a lot of work going on with test orders and results that this will collide with if we get them on another track, so I agree with you that we should keep this a little bit segregated so that progress can be made in both of them.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Terry, you mentioned another transition-of-care issue. Certainly, transitions are a key part of care coordination – coordinating around a transition. So, what was the other point you made?

Terrence O'Malley -- Massachusetts General Hospital -- ISP Task Force Member

It was just going to be to add other potential to and froms – have acute care to LTPAC, and the reverse is the same, LTPAC to acute care. If you wanted to complete the picture of that area –

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Right. I had the same thought that you're trying to get in there, so I can edit it here.

Terrence O'Malley -- Massachusetts General Hospital -- ISP Task Force Member

And, to Clem's comment, which I agree with – I think conflating these things is going to

confuse people. Perhaps as you mentioned, Steven, just a reference back to the similarity between closed-loop referrals and request results is sufficient, just to say that we acknowledge that, but people will go their separate ways.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Okay. We can try to figure out how – maybe you can propose some language and where you think it might go.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
This could be an item at the bottom where we have Level 2 or Priority 2 recommendations that's cross-cutting. We could add an item on – there are a lot of related use cases and observations we have that we may be pursuing different approaches to use cases that are similar pattern-wise, and the recommendation would be up to this group. Either we should hold pause on the different streams of work going on, step back, and see if we can come up with a common approach on all these use cases, or it's more that we have great work ongoing in particular areas; let's keep it moving, but do less drastic harmonization like recommending funding efforts to look for the similarities across these and look for ways where it's feasible to coordinate approaches.

It's a bit of a tricky issue because the end goal is that 10-15 years from now, we would want a consistent way of doing similar things without a lot of separate infrastructure maintained for separate use cases that are quite similar to each other. At the same time, we'd probably want the functionality sooner than we can achieve it than if we step back and redo some of this work. That's what I was hearing from folks to some extent as well, but that is a part that we've talked back and forth about in this task force, so it would be important to get folks' specific thoughts on whether it makes sense to go down our current path, which is that we have ways that work in particular use cases, and we should just go forward and explore how we might potentially harmonize it in the future.

Clement McDonald -- National Library of Medicine -- ISP Task Force Member
I'd certainly push for harmonization in the future because you get different user communities and different constraints. You can just order a lab test, but referral needs a dialogue, and there are different communities. You've got these engaged communities, like the lab industry, and what are you going to do? Kick them out? They've done all this stuff. So, I think it's tough to redirect, but we'll see what happens on all the tread, and maybe there is an obvious connection and we can make it all one.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Yeah. I think the big challenge here is that the natural course is for people to be aware, but keep charging ahead, whether it's voluntary communities of folks getting together because they just want to get their use case completed and this is a distraction and something that makes things go slower, or if it's, for example, a contracted ONC project. If it's not explicitly in scope to do this kind of harmonization, the natural thing that will happen is to say, "Well, that's out of scope. Somebody will deal with it in the future." So, this kind of coordination actually takes a lot of effort, and unless it's explicitly built in, I don't think it'll happen.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

In the interests of time, I think we want to move ahead. We want to get through this to be sure that there aren't any glaring opportunities for improvement before we take this and share it with the HITAC next week. So, let's go down to the next row, Row 3 in the spreadsheet. Here, we have an observation – and, this references a lot of discussion that we've had, but there's no standardization regarding what clinical data should be collected prior to referring a patient to a specialist and then shared with that specialist, the need for specialty-specific standards, and the fact that payers also have a stake in this related to their needs for prior authorization.

Again, that's an observation, and if you slide over to the recommendations, here again, we grabbed some of the high-level information that we have included in our submission to the AMA. We feel that there should be an organization or set of organizations that is identified and deemed to support the development of these clinical information standards that we should look towards the various groups that might be involved in that, and they're called out there, and again, referenced to the FHIR Argonaut questionnaire as a potential technology solution here. Again, this is language that really is pulled from other documents that we have developed, and we wanted to get any input from this in both this observation and the recommendation.

Tamer Fakhouri -- One Medical -- ISP Task Force Member

Steven, this is Tamer. This definitely resonates from our experience working with multiple health systems, each having a different approach to requesting specific data for referrals. It's made it difficult for us to standardize our approach operationally.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair

I think one question for the task force is is this a Level 1 recommendation like it is now, or is it a Level 2? Currently, we have it as Level 1, that this is important and should be a priority. I think it's appropriate, but if anybody has other comments…

Clement McDonald -- National Library of Medicine -- ISP Task Force Member

This is Clem. I worry that we haven't sorted through the issues well enough to be specific. So, my own historic experience was the referral questions were specific to the specialty and the reason for referral, so it's a very large dictionary we're talking about if we do that and try to get agreement with it. So, I think it's a good thing we should aim for, but if it's got to be done within some short period of time, it might not be doable.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Yeah, and we don't call out a timeframe. It's really a prioritization that we've been asked for.

Clement McDonald -- National Library of Medicine -- ISP Task Force Member

All right. Well, the other thing is getting back – contradicting what I said earlier, there is something parallel in laboratory where they do ask order entry, and you see a lot of questions and requests for genetic tests that are very specific and may be analogous to what you'd see in a referral request. I just wanted to lay that out. That's not a necessary change for

where you're going.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Yeah. And specifically, if anybody feels this should not be a highlighted, Tier 1 recommendation, please make your voice heard. Otherwise, I think we keep it as a Tier 1 recommendation.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Okay, then let's go on to the next row, where we make the observation that clinician-to-clinician messaging about patients is really not fully integrated with EHRs today, and this is challenging when clinicians are in different organizations or using different systems, that transitions-of-care messaging, which was supported by meaningful use, 360X leveraged Direct, but that this standard has been implemented inconsistently across systems, that some work has been done, some of us have been involved in trying clarify what the challenges and opportunities are when using Direct more consistently, and then, also acknowledging that FHIR could also potentially support this kind of secure clinical messaging as another transport mechanism.

And then, flipping over to the recommendations, there is work that needs to be done to support, incentivize, and eventually require the EHR vendors to provide this functionality, whether it's on Direct or FHIR, but the key here, again, is separating out the functionality need from the underlying technology solution, that more work should be done with Direct, with FHIR, or if there's some other solution in the future, but that there is this need for clinicians to be able to communicate if they are indeed to coordinate care. And, we know that this kind of communication is central to closed-loop referrals, both the sending of the referral and the sending back of the information, but ongoing care coordination as well.

So again, these are still pretty high-level recommendations and observations. Some of the references that we're including go into a lot more detail, but again, we see this – we've listed this, I should say, as a Priority 1, and we wanted to get people's feedback on that. I think these are getting short enough that we might be able to get the observation and the recommendation on a single screen. Let me try to resize things a little bit so that folks can look at it in that way.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Sasha has her hand up. Please go ahead.

Sasha TerMaat -- EPIC -- ISP Task Force Member
Thanks, Ken. Steven mentioned that this is a very high-level recommendation, and I think one of the things that EHR developers think pretty closely about – when functionality would be required and effectively preempt user requests. If it's going to be automatically pre-prioritized above what the users of that particular system would already be asking for, then we want to be very judicious about where those features are used and leave a lot of freedom for users to request what they think is most important in many cases.

I'm worried that this is not specific enough as to what would be jumping the list in that case. I think many of the features that we've talked about here are user requests in the sense of being encouraged and supported to include – will naturally be included in many electronic health records as users find them desirable. If we're really suggesting that certain features be required, I would want that to be a more specific list with a justification for why those certain features need to be bumped above a user prioritization.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

That's an interesting observation, and again, I think if people reference the article that was published on this, that was developed by users, by clinicians, and did just that – prioritized the specific functionalities and the justification for why each of those was important. So, I think a lot of that was there; it was just an effort by a bunch of people to do that. But, you're absolutely right. Individual vendors will have their own voices, their own customers, saying, "This or that is more important to me." The attempt there was to broaden community input to support that discussion. So, I think what you say is true, and I'm not sure it – in my mind, I don't see immediately how it would change this recommendation.

Sasha TerMaat -- EPIC -- ISP Task Force Member

My thinking would be that we need to differentiate EHR features such as the ones listed in the report to ones that would specifically need to be required in something like a certification program because – and, presumably, the reason they need to be required is because it's important that all systems implement them consistently – although there might be other justification for certification-enforcing that maybe I'm missing, but I guess that's what we'd want to look at – from features that are going to be naturally prioritized by the users of a particular system based on their workloads and their other priorities.

Especially within the EHR development community, there are products that focus on all different types of specialties, on use cases, on different environments. They might prioritize some of the items on this list at different times. Certification preempts that. It distracts from what their users have asked them to work for first. And so, I think I would want us to be more specific to say, "These five things have been explicitly considered by the committee and would be appropriate for EHR certification. These other things are strongly encouraged and should be prioritized by the users of those systems as being important to the closed-loop referral workflow."

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Yeah, I see what you're saying. So, if we had the time to go into that level of detail, to look at specific functionality requirements related to messaging, and I guess my concern is that we don't have that time.

Sasha TerMaat -- EPIC -- ISP Task Force Member

Can we edit the recommendation to call out that distinction and say that generally, the items listed are supported and encouraged? If there are items which are, in further deliberation, determined to be important to adopted consistently by all systems and to preempt user requests, those could be considered for certification. I'm worried that the recommendation as it is now would read that at some point, all of these things should be blindly included in

certification, which misses the distinction.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Got it. Yeah, do you want to recommend some language that's maybe a little bit shorter than what you just rattled off? We'll try to pop that in there. I think that's a great point, Sasha.

Sasha TerMaat -- EPIC -- ISP Task Force Member
Sure.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Ricky has his hand up. Ricky?

Ricky Bloomfield -- Apple -- ISP Task Force Member
I just wanted to back up Sasha's point there. I think our role is stronger in recommending approaches and technologies to support the use cases – especially in things like this – over whether they should be included or required for adoption because I think a lot of these technologies are early enough that it would be premature to require something, and we should let the market figure out what makes sense so that we don't paint ourselves into a corner.

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
Yeah. I think one thing to add here is – especially cross-institutional, in some cases, intra-institutional – the financial aspects make this one a little bit tricky. For example, if a primary care physician has a question from a neurosurgeon's referral, there's a very clear path of how the neurosurgeon gets paid. There's not so clear a path if you ask a question to someone you haven't been referring with, but, for example, had a question internally or externally, how does the neurosurgeon get paid? If it was in a value-based care environment and people were part of an accountable care organization, et cetera, yes, we could identify it, but it's tricky.

It's a question of if people texted us or sent us messages and we got inundated with them, how would we do what we do to get paid for our jobs? It's that kind of thing. So, I think this one has that element behind it that makes it a little bit tricky, so even if we have the technology in place, people may not be willing to do it very much if they need to see their patients in ways that get reimbursed.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Great. Any other comments on this one? Good. I made a couple of real-time edits there in response to what I'm hearing, softening the recommendation a bit, but Sasha, I think your other suggestions would be good. Let's go down to the next row, then, which refers to the fact that there is a need to reliably identify and locate providers if you are going to be managing referrals and coordinating care, and to understand the messaging capabilities of each of those providers.

This goes to the idea of the provider directory and the importance of ongoing development

and advancement towards a nationwide standard for managing these directories such that they include contact information, preferred methods of communication, and messaging capabilities. And, in the observations, we call out both the Argonaut implementation guide and the work that HL7 has done, but really, making the suggestion that this work needs to continue and that this is one of those uses of health IT that needs to be prioritized – or, functionalities, I should say. Any thoughts on that? Again, as Ken said, if your thought is that this is a lower-priority need than some of the others we've been talking about, this would be a good time to change that.

Clement McDonald -- National Library of Medicine -- ISP Task Force Member
This is Clem. Is there any way to tie that into the NPI – add some more fields? That's already there and available.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
It seems pretty clear that the NPI would be included. We can certainly add that just as a comment here. Other thoughts? Okay. And again, overall thoughts too. If people feel like we're going in the right direction, the wrong direction, this is meant to be very much the recommendations of this task force. Your name is going to be on this.

Looking down at Row 6, this was a point, Terry, that you really have been driving home for us. I really would be interested in your thoughts. But, the key issue – we're talking about standard functionalities, sometimes standard content, talking about technologies, but the fourth leg of this stool is really the governance and the fact that there is need for governance to support this kind of information-sharing, the referral pieces of that, and right now, there is governance over Direct messaging provided by DirectTrust, there has been, obviously, the first draft of the trust exchange framework published by the ONC with an additional draft expected any day now, and the idea here is that we felt that the governance structure that evolves – presumably, under the TEFCA, this should support this messaging.

I think in the first draft of the TEF that came out, it seemed to be primarily focused on query-based document exchange with a lot of references to the future opportunities with FHIR. It didn't so much address push messaging, and I think the recommendation here is to assure that that governance does include both push and pull as it moves forward. That's really what this is meant to capture. Thoughts on that? Terry, please add to this because I know you've given it a lot of thought.

Sasha TerMaat -- EPIC -- ISP Task Force Member
Is this consistent with the previous TEFCA feedback that we had? I felt like push messaging was not included, and that was okay in our previous letter. I might have to –

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Whose letter are you referring to?

Sasha TerMaat -- EPIC -- ISP Task Force Member
There was a separate task force that provided feedback on the Trusted Exchange Framework

back during the public comment window and shortly afterwards, and it issued recommendations to ONC coming out of that task force of the HITAC. And, one of the things that task force discussed was the potential inclusion of push messaging into the Trusted Exchange Framework, since it was not originally part of it, and I'm struggling to remember exactly what the conclusion was in that previous task force, but I don't think it's consistent with this recommendation, and I guess that makes me a little bit nervous.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Were you on that task force? I wasn't.

Sasha TerMaat -- EPIC -- ISP Task Force Member
I was. I'm trying to dig up the letter to confirm my memory of what we had…

Clement McDonald -- National Library of Medicine -- ISP Task Force Member
I would hope push would be included because it's so much more convenient.

Sasha TerMaat -- EPIC -- ISP Task Force Member
Clem, you were on that task force, right? Don't you remember the conversation about the prioritization initiative that folks had? If I'm remembering correctly, the consensus was that we desired push to be included, but felt that the timeframe for implementing the directives wasn't practical to expand the scope that extensively.

Clement McDonald -- National Library of Medicine -- ISP Task Force Member
I have to confess I don't remember that detail, but I do think push is almost preferred to other kinds of messages. For the patient, you've got to remember to keep going back to see if it's done yet, whereas if it got pushed to your PHR when that happened, it would be very nice. I'm not sure about the timeframe, but I do think push would be good.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Again, we're not calling out timeframes, though we are identifying priorities. Sasha, going back and looking at that letter and the work of that task force would be great if you have the time to do that and let us all know what you find there. Are there other thoughts from folks in terms of governance of the push messaging required to support referrals and care coordination? Again, today, it's being governed largely by DirectTrust, but again, they're focusing exclusively on Direct messaging, though I know that there's certainly a lot of discussion there about expanding to support FHIR. Other thoughts on this one? Again, Terry, I'd love you to chime in if you can.

Terrence O'Malley -- Massachusetts General Hospital -- ISP Task Force Member
Well, at the risk of derailing this, if you think about how parts of the healthcare system connect, it's almost like cells connecting through a tight junction. They connect around the care patients. It's looking at that tight junction where information flows from one cell to another that you get the concept of a common governance structure. So, it doesn't matter what you're moving from one to the other. It's governed by these principles and these standards, and you can buy into that structure by implementing it, signing onto it, and

becoming part of a trusted exchange, in a sense.

But, if you think of the same thing about 360 closed-loop referral process, it's a messaging process, and that probably also can live in the tight junction. It doesn't have to be incorporated into the cell. It just has to live between parts of the healthcare system. So, that's the analogy I was thinking of with the governance structure. It really governs the space between providers, rather than within each provider.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Again, in the interests of time – I really appreciate those comments – I want to at least get us through the rest of the content here and be able to capture any high-level feedback. We've only got four minutes before we go to public comment. So, let's scroll down to the Priority 2 issues and see if there are any of these that need to be removed or fleshed out substantially.

The first one is the acknowledgement that a lot of referral management and care coordination today relies on fax and other methodologies that do not bring the data directly into clinicians' EHR workflows, and the recommendation to support efforts to transition to and eventually require secure cross-organizational, cross-vendor, EHR-integrated electronic messaging. Again, it's a high-level recommendation. There's not a lot of meat to it. Interestingly, I read yesterday that the NHS in the U.K. has decided they are going to outlaw the fax by 2020, which is pretty remarkable. So, are there any concerns about the way this is included and phrased? If not, I'm going to keep rolling on here.

The next one goes to a pretty different area, which is patient-clinician messaging, which is supported today principally within EHR-integrated patient portals. This acknowledges that there's a real desire for increased flexibility of this messaging. It acknowledges that such messaging needs to integrate with EHR workflows to be truly functional and acceptable to the clinician community, that it has been worked on with Direct, that FHIR could potentially work here, and a recommendation to support pilots of patient-to-provider messaging using multiple available technology solutions. Again, that doesn't go into a lot of depth, but points a direction to support that. No hands up? I just want to get through this.

Real-time text messaging – we've also raised that as a key technology that supports care coordination, especially within acute care facilities, but also in other settings. Some of the challenges people have seen with that are that it's perfumed outside the EHR without permanent documentation of associated **[audio cuts out] [01:15:45]** decision-making or communication, and here again, a high-level recommendation to work toward standards for the use of secure real-time text messaging that supports integration with EHR documentation and workflows. Any thoughts or concerns?

Clement McDonald -- National Library of Medicine -- ISP Task Force Member
My one concern is that – I think real-time text messaging, which is secure, would be terrific because we have a problem with secure. But, if we wrap it in too many standards, we may really hogtie ourselves. We may end up having to go back and polish our language because it's going to go into the message, et cetera. I'm a little nervous about that side of it.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

So, we change it to "explore elements"?

Clement McDonald -- National Library of Medicine -- ISP Task Force Member

Well, explore use of it in general. It'd be really nice some time if we could just talk and get something done. I think it would be terrific to have it. It would solve all the problems of security. They're secure messages.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Right. Thanks, Clem. And then, the last one is the notion that patient care is often fragmented, that this can introduce patient safety concerns due to a lack of coordination between providers, and the acknowledgement that a multi-stakeholder, multi-institutional care plan could help to address this, that some work has been done in this area, but that this is another area to support referrals and care coordination that would be worth investigation. There's been some work done with FHIR and CCDA care plans, but again, saying that we see this as a priority and one that the ONC should continue to support.

And here, again, these second-level priorities are higher-level, but we thought that they made sense to include based on the discussions that we've had. Any thoughts on that one? There are some general observations at the end, and I also included there Terry's earlier point about the similarities between the needs of care coordination orders and referral results. We can try to flesh that out a bit. Terry, I know you've had some thoughts. If we can just scroll down one row here to see that last line, that would be great.

So, these are the recommendations that we've drafted. We got some good input today. I've got three action items. Terry is perhaps going to flesh out this language at the bottom. Sasha, you were going to offer some language about balancing the requests for advancements in messaging functionality and look at the TEFCA task force recommendations to see if we have any challenges with alignment there. So, having said that, we're a little late for public comment. Let's hop over there.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer

Great. Thanks, Steven. Operator, would you please open the public line for comments?

Operator

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

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer

Thank you. While folks are dialing in, I'll just circle back to see if we've been joined by any other task force members. Arien, Andy, Les, Jack Po, Scott Weingarten, Cheryl Turney, Tina Esposito, or Victor Lee? Has anyone else joined us? Okay. Operator, do we have any comments in the queue at this time?

Operator

We have none at this time.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer

Okay, great. Thanks. I will give it back to Steven and Ken.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Great. Well, again, that was a pretty quick run through a lot of recommendations that we have pulled together based on the last four or five meetings of our task force. I know we've got a lot of people on the line, and we've had a good discussion. Any other thoughts before we – actually, what I meant to say was I know that some of you perhaps didn't have a chance to review this in detail prior to today's meeting. We do intend to pull this together into a presentation for the HITAC, which we'll be given in just a couple of days.

I know the time is very short. I hope to hear back from Sasha and Terry in regard to specific recommendations on the language. If that happens by the end of the day today, that will be awesome. But also, if others have specific comments or thoughts that you want to share after this discussion, feel free to put those in the comment column in the spreadsheet that is posted on Google Drive. If anybody doesn't have that link, we can certainly get that back out to you. Any other thoughts on that, Ken?

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair

I think that sounds good. And, Sasha put in a chat – Sasha, I don't know if you want to briefly verbalize it…

Sasha TerMaat -- EPIC -- ISP Task Force Member

Sure. So, my second follow-up was to go back to the Trusted Exchange Framework Task Force letter and reference what they said about the push standards being included in the TEF, and I did, and I remember now why we had such extensive debate. The task force could not come to consensus, and offered two recommendations to the national coordinator because of that. There's basically one recommendation that says, "If a broad scope is chosen, we think the following things should be included." There's a second recommendation that says, "If the three-year timeframe for this Trusted Exchange Framework contract with the RCE and so forth only permits a small scope, then we think it has to be narrowly focused on the following things."

And so, I think the dispute was not intended to prioritize the importance of any of the different use cases, simply the ability to accomplish it in a short-term timeframe in a practical manner, but that was the flavor of that debate. I think given that we had offered those two recommendations, the recommendation that Steven was showing earlier would be reasonable in that context.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair

Thanks, Sasha. That's really helpful that you went back and did that. Let's quickly pop over to

the other spreadsheet that we have to display. Again, I made reference to this earlier, but you will recall that we all worked together on our orders and results recommendations, and we've taken feedback – we've continued to get comments from folks on these since we finalized our draft recommendations and presented them to HITAC. And, what we've done is we have made some amendments – they're in a couple different colors because they came from different people – we made some amendments to… This is actually not the right one. I'm sorry. What we're looking for is the recommendations related to orders and results. I did send that to the team – to Lauren and Sarah – earlier, and hopefully we can get that pulled up.

Be that as it may, while we're looking for that, there is an iterated version of the orders and results recommendations that includes – I'm just going to pull up my own copy quickly to make reference to it. One second. I'll speak true what it is that has been added there. Specifically, we've made some language changes, trying to streamline things in the core recommendations that we had made earlier, and then we added two recommendations at the end on the input from David McCallie.

One was more of a focus on the provenance metadata and the importance of maintaining that with the result data as it moves around the system, and we went into some detail there. The other one that David raised, which we really hadn't had a chance to talk about much as a task force, is the need for some kind of digital signature or other functionality to assure that results information has not been modified or tampered with as it transits across the system, the idea there being an acknowledgement – here we go, good. Can you scroll down to the bottom of this document and show the last two rows that are mostly in green? Perfect. Right there.

So, these were new recommendations that were added primarily at the suggestion of David McCallie, and again, we're not going to take the time to go through these in detail, but we do have this modified document with additions in green and subtractions in red, and we want all of you to have a chance to review this, and then I hope we will take some time at our next meeting to go over this and look toward finalizing the orders and results recommendation in anticipation of our reporting to be done next year. So, that has us at time. Ken, any other closing comments?

Kensaku Kawamoto (Co-Chair) -- University of Utah -- Co-Chair
I think we have most of our upcoming meetings beyond the HITAC in a few days canceled for the holidays, so I hope everyone has a great holiday.

Steven Lane (Co-Chair) -- Sutter Health -- Co-Chair
Thank you all. Have a great day.

Lauren Richie -- Office of the National Coordinator -- Designated Federal Officer
Thank you, everyone.

Terrence O'Malley -- Massachusetts General Hospital -- ISP Task Force Member

Thanks.

Clement McDonald -- National Library of Medicine -- ISP Task Force Member
Thank you.