



Health IT Standards Committee

2017 Interoperability Standards Advisory Task Force

Final Transcript

June 20, 2016

Presentation

Operator

All lines are now bridged.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Thank you. Good afternoon everyone, this is Michelle Consolazio with the Office of the National Coordinator. This is a meeting of the Health IT Standards Committee's 2017 Interoperability Standards Advisory Task Force. This is a public call and there will be time for public comment at the end of the today's call. As a reminder, please state your name before speaking as this meeting is being transcribed and recorded. I'll now take roll. Kim Nolen?

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Hi, Michelle, I'm here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Kim. Rich Elmore?

W

I got him.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Christina Caraballo?

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Hi, Michelle, it's Christina.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Christina. Christopher Hills? Clem McDonald?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Clem.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Hi.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Dale Nordenberg? Dan Vreeman?

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

Here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Dan. David McCallie?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, David. Eric Heflin? Kin Wah Fung?

Kin Wah Fung, MD, MSc, MA – Staff Scientist, Lister Hill National Center for Biomedical Communications, National Library of Medicine

I'm here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Kin Wah. Mark Roche?

Mark Roche, MD, MSMI – Chief Medical Information Officer – Avanti iHealth

Here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Mark.

Mark Roche, MD, MSMI – Chief Medical Information Officer – Avanti iHealth

Hi.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Michael Buck?

Michael D. Buck, PhD – Senior Director Biomedical Informatics – New York City Department of Health and Mental Hygiene

Here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Michael. Michael Ibara?

Michael A. Ibara, Pharm.D. – Private Consultant – Michael Ibara, LLC

Here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Michael. Robert Irwin? Russ Leftwich? Susan Matney? Tone Southerland? And from ONC do we have Brett Andriesen?

Brett Andriesen – Project Officer – Office of the National Coordinator for Health Information Technology

Brett's here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Brett. Is Nona Hall on? Anyone else from ONC on the line? Did we get Rich Elmore yet?

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Hi, Michelle, how are you?

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Rich, perfect. So, with that I'll turn it over to Kim and Rich.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Go ahead Kim.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Thanks everybody for joining today. We have a packed agenda again today and we have some read outs from David's API Subgroup that they are going to read out. Rich did a summary from our last call and then we updated our previous comments from the June 2nd call. So, we are going to go through those, review our work plan and our next steps and we can move forward unless Rich you have a couple of comments to make?

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

No, that's a good summary, thanks, Kim.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay, thanks. So, next slide. Here are our members and we can go to the next slide and this is just a review, I am not going to spend too much time on these. This is just our phase one now through the end of July.

The other thing to remember these slides that we're working on today will be...a majority of them will be what we present on Thursday at the Joint Meeting that we're having with the Standards and Policy Group on Thursday. So, if there's anything you want in there please let us know by tomorrow so that we can adjust the language in that.

And this is just a draft recommendation, just a preliminary so if something is in there that needs to be changed there is still the opportunity to change it before our July when we do our transmittal letter. So, that is phase one and then phase two are other topics that we think would be good to have in the ISA document and projected editions and next slide.

So, here are...David, is it okay if I hand it over to you for this?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I guess so.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay. David and Clem, and Eric and Christina, and Rich I believe and I hope I didn't leave anybody out, met last week to talk about what the ISA document should include in regards to APIs. So, David had written up a nice summary for that and wanted to present it to the group for feedback.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Thanks, Kim, the only name you left out that's in my notes is Nona Hall, also participated...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Oh, Nona, yes, I'm sorry.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

In some of the discussion. So, we had a...

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

Rich?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Go ahead?

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

This is Eric Heflin I just wanted to let you know I joined a few moments ago.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Oh, good, good. So, we had a, I'll call it a robust discussion, I started by reviewing for the group the conclusions of the ASA Task Force from last year that was co-chaired by Arien and myself with input from a number of the larger vendors where we kind of laid out some preliminary recommendations not

about the ISA document itself, but about how to think about API-based interoperability. So, we went through that presentation in a hurry, probably too quickly given the amount of confusion that I think I created by maybe trying to fly through it too fast, but that led us and got us started to sort of work through what I think, I hope, are a fairly accurate summary of our group's deliberations.

Due to the fact that we had just a weekend in between our call and this call not everyone has had a chance to weigh in to me off line so I know now on this call a couple of people who hadn't had a chance feel free to speak up and put your inputs in.

So, we described...I broke up our report out into kind of two things, one was sort of our observations, if you would, lay of the land survey and then the second slide that will follow this is a specific set of recommendations and then the third slide is just some examples of what we think are currently good exemplars of what we're talking about here.

So, a lot of words on the slide, I sent this around as a Word document so people could, you know, edit it in review mode that's the reason there's so many words. I think for our formal presentation we probably want to simplify these sentences down to a smaller number of words but let me go through it.

The first observation is that there is a new generation of API-based interoperability models that are emerging and I have contrasted these to bespoke interface approaches where each interface sort of starts from scratch and in contrast these API-based interfaces are aimed at leveraging an existing already deployed API so that you get from notion to interoperability with less rework, reuse, you improve reuse and reduce the rework and we discussed this in terms of building blocks which can be composed to address higher level use cases and if that doesn't make any sense to you just hang on I think it will make sense as we get a little bit into it.

So, the second point, I'm going to try to just summarize these in a one...I'll just talk until I get through the high-level here and then we can go back and dig in because I think you have to kind of hear the story as a whole for it to make sense.

So, these new approaches, these API-based interface approaches, I'm on bullet point number two, assume that standardized low level APIs such as HL7 FHIR will or already are being widely deployed and therefore by emphasizing reuse of these pre-deployed standardized APIs the new interoperability approaches hold hope for more rapid evolution of sophisticated interoperability capabilities. So, that is the fundamental premise is that it's going to be faster to get to sophistication by reusing existing lower level APIs.

Third point is these reusable building blocks include both healthcare specific API standards like FHIR as well as Internet standards or standards from some other space than healthcare which have been profiled for healthcare use and the exemplar for that in the current work that is going on is OAuth 2 and OpenID Connect which is in fact itself layered on top of OAuth 2 so you could really sort of say OAuth 2 is both of those later ones and the point there is that the building blocks don't all have to come out of the healthcare standards organizations they can obviously come from other sources as well but they may have to be profiled for healthcare use because of the specific needs of healthcare.

And then bullet point four is kind of the heart of our...that will drive us to the heart of the recommendation, which is there is potential for ISA confusion because these new approaches require

standardization on multiple levels independently or multiple levels at the same time and our thought was that consumers of the ISA need to be aware of these different levels of standardization and the easiest way to work through that is an example, for example the ISA will need to document the standardization of the lower level APIs, such as FHIR, while recognizing that these APIs may also become component parts of multiple independent higher level interoperability use cases.

Note that the different subsets of FHIR resources and the associated profiles may be needed for different high-level use cases, the same maybe true of security and other building block standards, in other words, standardization may need to be independently specified for more than one level of the interoperability stack.

Now if that doesn't make any sense to you let me try to, you know, I'd be happy to answer questions and try to explain, but if I was just to say it in a different way, we will certainly want the ISA to describe FHIR as a standard but that's not sufficient to cover the higher level use cases that leverage FHIR to do other things, you'll need more specification to cover that and we'll go into what we think some of that would look like in the next slide. But let me stop talking and see if there are reactions to slide one here.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, Dave, I already sent you the notes, I think the lower level ones that you described as sort of the core are right and good. I think you should maybe specify, name what OAuth 2 and OIDC is in whatever we do and say that they're complimentary and necessary to complete the task with FHIR, but as you climb up the...as we climb up the ladder of other things talking about things you can't name I think is always problematic and woolly and you can say, I guess, in general it may...but if you don't name them it's not a good discussion I don't think. And if you name too many of them it isn't necessarily correct.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I think that OAuth 2 would be enumerated as a specific lower level standard. OpenID Connect could be enumerated as a profile on top of OAuth 2 specifically...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

For healthcare uses, yes, totally agree, along with FHIR and...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

And then...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Potentially others.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

It's necessary, I mean, they complement and are needed to achieve the goals of FHIR in most cases...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, yeah.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I think.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah it's designed that way, separation of concerns. And I'm looking at what our output is as a high-level set of recommendations, if in our later meetings we want to dive in and actually get to concrete specifics we certainly could do that, but I wasn't trying to be...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Okay, yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Enumerative, I'm being, you know, descriptive at this point.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, but I mean, it's kind of wide open and as I expressed and I actually talked to some people in the FHIR community is the idea of having any unnamed things maybe just the same as the ones that are named we'll never get interoperability if everybody is doing different things more than they're doing now.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I think...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I think...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I think...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Without saying we're going to close off the future of course the future is there and what will happen will happen...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

But it seems like we should at least...the first goal I think is that we get interoperability out of this stuff somehow or something...or at least understandable transfer of data the way HIMSS defines it.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I mean, as you know from our own conversations standards are the last step in interoperability, you've got to have people who want to interoperate and who will agree to want to solve the problem.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, that's not always true though Dave, I mean, just think about what...the NCPDP eStandards that wasn't based...well, I guess they were a group, never mind, I take that back. Medicare defined stuff and it happened it doesn't have to have everybody agreeing on it.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, yeah, but that's a...if a hugely important business driver says "you must use this standard to talk to me" then that's de facto a business case was made and then they speculated the standard. We don't have that for most of what's in interoperability, it's not forced on us. So, you have to have people figure out what they want to do and then find the right standard to do it. It rarely works the other way unless you have somebody with infinite power and in the case of CMS you've got that.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I think you need less...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

David?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Than infinite power, I think ONC could push harder than they have.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, they don't have the authority at least in their own estimation, but okay, they could, they didn't, they haven't.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

David, I like this and I read the document last night and I think what Clem said about those being complimentary that was sort of my comment that I had sent back to you to like explain because I really think at this point this is more for the lay person than it is for the technical people for them...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

To understand about these components and the building blocks, and how they work together and how one piece of it isn't going to work you have to have all the pieces together so...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

That would be my feedback.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, the end verse to that is that you want to make it clear that these aren't either/or when you list them because that implies it's a free for all.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, I don't quite follow Clem, you know, we have hundreds of use cases listed in...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

No, I'm saying...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

The ISA...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, well, I'm not going to defend the full montage in ISA, but I just think if our intention is not to get to the point where at least routine things can happen in a standard way without a lot of work why are we doing this? We might as well just twiddle our thumbs and wait until the world changes.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

So, I would say that's what we're trying to do and that's the reason I called out two levels of standardization, there's standardization at the FHIR level, also at OAuth 2 but let's just focus on FHIR, and then there's standards that profile or take advantage of the lower level standard to solve specific higher level use cases. Now, in other words, both of those need to be done, I think we are agreeing on that point.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yes.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

The problem is that FHIR is immense and it's unlikely that any single system will ever implement more than a fraction of FHIR in the real world and so the...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, it's not...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Higher level...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

To be a little strict on what we, you know, what we talk about and encourage.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, that's why the JASON Task Force recommended a so called core subset of FHIR services that everyone would be expected to implement that's indirectly specified in the 2015 Edition Certification Rules and it basically boils down to you must be able to move the discrete data fields that are in a C-CDA plus a few stragglers.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

So...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

And that's what the Argonaut is working on. So, I agree, you need a core subset but FHIR is much, much, much bigger than that and some of the higher level use cases will use different parts of FHIR and they may profile it in different ways depending upon the needs of the use case, FHIR's, you know, good news it's very flexible, bad news is it's very flexible you have to profile it.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

So, the recognition of the ISA needs to be that all of the above is true, you have a lower level spec, there's a subset of it that's called core that will maybe become a regulatory requirement at some point in the future and then you have higher level use cases that recombine it in ways that may require sub-specialization or even extension in both directions to the FHIR APIs, to the core APIs I should say. I don't know any way around it.

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

So, Dave, this is Dan...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I think we could have done a lot more already, but anyway that's a long story and I won't go into it. I think the new technology keeps everybody glazing into the future and we don't get anything done or not enough done. NCPDP just did it and I give credit to them and DICOM has pretty much just done it and credit to them.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

For very narrow use cases and driven by powerful...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Very large use cases.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

No, narrow.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I mean, you're talking about an industry that's, you know, I don't know 40 billion, 80 billion dollars, 100 billion dollars a year.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Okay, narrow.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

And that's for images.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Narrow use cases. Highly important but narrow and whatever, so there was another comment?

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

Yeah, this is Dan, so first of all Dave I like your thinking. I like how you laid out these things but as I was still getting a few things together for the Structure Subgroup call tomorrow one of the future things or sort of things to noodle on is I actually think this applies equally the same kind of across the board, right, so you have places where, I mean, you can use, right, HL7 or two messages in a highly sort of detailed lab reporting guide but you could use that same structure for radiology reporting with kind of...with or without a specific implementation guide just like you could use CDA to send lots of different kinds of documents independent of having CCD with more narrowed definitions and so I think the pattern is something that could be applied more broadly across the ISA but is particularly relevant for the thinking around APIs because people are often confused about it, but I think it applies more broadly.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, that's an excellent point and I totally agree this is a pattern that anyone who have ever distinguished between an SDO and a profiling organization is quite familiar with, the profiling organizations take the outputs of the standards organizations and combine them to serve use cases, IHE has been doing that, you know, for a long time now.

What's different is the existence of healthcare specific lower level API standards like FHIR is new in a practical sense it's new you could fake v2 that way and v3 had a vision that it would be an API standard but it never matured. So, we now have the opportunity to be much more precise about the reusable API for data access but the rest of it is just the same profiling that groups have been doing for a long time.

The thing that bothers me or that worries me a little bit is this equation that if you implemented FHIR you've solved all these high-level interoperability problems and, I mean, anybody who knows the field understands that's not true but people are using this ISA document that don't necessarily understand that and they may say, oh, I'll put the procurement specification that they have to support FHIR and we're done, we've covered all this interoperability and I'm just saying "no" that's not sufficient, it's a start but it's not sufficient.

Well, let's go to the next slide and finish the thought and then we'll zoom back in and review things because I feel like we're reasonable convergent with the tension between Clem and I about how precisely things should be nailed down, a tension that may not get resolved.

So, the recommendation section fairly lightweight and hopefully not too terribly controversial set of recommendations, first is ONC should add a section to the ISA which highlights the key differences between API-based interoperability standards and pre-API interoperability standards, that probably needs to be worded better but I think you get the gist.

That ISA should continue to focus on use case driven approaches to interoperability guidance but in so doing will need to maintain clear distinction between the lower level standards that make up the building blocks like FHIR and the higher level use cases that leverage those lower level building blocks, that's basically what we just said in the previous slide. Like I said, too many words.

Higher level use cases should produce implementation guides that document their use of the core API standards but which also include additional specification and constraints potentially including the things I've bulleted here, but this is illustrative and not exhaustive, but some of the things that the higher level use cases will need to do is one use case specific profiles of the FHIR resources including any extensions to the resource like in the US the resources for patients are extended to include gender and ethnicity and some things that the EU doesn't use, specific value sets, query parameters that are required to be supported and so forth.

Number two, use case specific profiles for the security standards such as OAuth 2 and OIDC so there are different ways to use OAuth 2 and nailing that down is an important use case specific decision, is it a consumer-facing use of OAuth 2 or is it provider-facing in the constraints of an EHR those use OAuth 2 in slightly different ways.

Number three, what I called orchestration patterns that define the sequence of interactions between the key actors and access patterns to the core APIs, so these are the things that you're familiar with such as sequence diagrams, network topology layouts and so forth.

And then number four, enumeration of external infrastructure that maybe required for deployment, things that are not part of the standard itself or are not part of the use case itself but which need to be there if you actually are going to get use of it like national scale directories, certificate authorities that people have agreed to trust and so forth.

And then our final recommendation was that...and we didn't talk a lot about this so I put it on here with...tentatively here that future ISA editions should consider recommending deprecation of older approaches in favor of the API-based approaches, once sufficient experience is gained with real-world deployments and when there's a clear advantage to the newer approach. Parsimony of ways to solve

the problem in the long run is I guess the goal there, it's let's not keep supporting two completely different ways if the new way meets the requirements and has more flexibility going forward.

So, again, let me stop and see what reactions we get.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I think the last item is really inappropriate. The world is going to fix things as it goes on and we shouldn't pre-judge, you know, these things may flop, I don't think they will, but they might, I don't think it makes any sense to have that last item.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, Clem, I would of thought you would say exactly the opposite because this is the way to prune the list, you deprecate the older things when there's a better way to do it.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, that goes without saying, but we don't know what's going to win.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, I...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

And I'd go back to the old ISO spec that the Europeans were certain was going to be instead of the Internet. Let's let the...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, well that's the...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Let's let the market sort it out it will.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I couldn't agree more, but that's why I put once sufficient experience is gained with real world deployments and when there's a clear advantage to the newer approach.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, but it's like...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

The...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Saying we ought to be good to people, you know, or solve world hunger, I mean, it just goes without saying. I don't think it adds...I don't think it's reasonable to put that kind of statement in.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

But you want to remove things from the ISA. On every one of our previous calls you've argued for pruning things from the ISA.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yes.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

On what...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

But this isn't consistent with saying we should systematically decide the future.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, this just says deprecate older approaches in favor of newer approaches if the...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Newer approach is known to work and it solves the problem better.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yes...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

This is Christina, this one caught my attention as well and I re-read it a couple of times right before this call and in theory that sounds like a great approach but I think that there's a lot more that needs to be defined if we put that in here like what constitutes a deprecating approach. There's a lot of other factors on this bullet that I kind of flagged it. Again, it makes sense in theory, but...

Dale Nordenberg, MD – Chief Executive Officer – Novasano Health & Science

So, this is Dale, I like the whole discussion today, I like the new material and new perspective I think...and I think the devils in the details a little bit with the last statement in terms of what it exactly means, but when it comes to interoperability at the end of the day the market drives what will happen in terms of really adopting interoperability based on business cases or use cases, you know, that's our biggest challenge I think experientially is for whatever reason it is not really having enough gravitas and momentum around a business case to drive a whole market but rather pieces of the market.

So, I like everything that's been done and said and I'm even okay with the last statement understanding that it's a recommendation but the real world will apply the real world kind of direction I think.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I think it's got too much hubris in it for a government statement.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Boy, Clem, it's pretty vague but like I say, it came up in our call, I can't remember who made the point, Christina was it you about deprecating? I had it in my notes.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, if you wanted to say we should deprecate duplication wherever it exists when we can that would be more acceptable, but you're picking a horse that hasn't really gotten fully out of the gate yet.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, Clem it has.

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Yes.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

It has and this is not a specific recommendation about FHIR, right?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, it's about API-based approaches which I consider very much that's the one horse I'd ride in APIs is the FHIR horse.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Okay and so you think that we just don't know enough to suggest that they might ever succeed?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

No, no, no, no I just think that this is superfluous and misleading, you know, it just isn't...whatever happens will happen the market is going to decide it and to say we're going to kill NCPDP because we think APIs are better that's just going to bring political backlash.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, certainly no one is advocating that, there's not a...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, that's how it...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Better way to do it.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Could be interpreted.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

There's not a better way to do it. I mean, there's no...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

So, one...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

To the new approach.

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Yes.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

It's speculative.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

When we talk about moving...using a CDA, a Consolidated CDA, to move patients summaries, structure patient summary data around the newer approaches are almost certainly going to be better.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I agree, but why make this broad sweeping statement that it's either a tautology, you know, or it could be insulting. I don't know what's the point and especially if it's coming from government position things.

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

So, in our call we were, as I remember, all in agreement that standards that are never going to be used and are just on there for no reason could go away. I think this sentence just might be a little bold but Clem I remember you saying we did want to trim it down.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

So we want to trim the list as it exists...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Right.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Independent of whatever...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

But if you have something on there that's been around for 10 years and it's just on there for being on the sake of being on a list but nobody's using it then I think those are the ones we were saying let's start...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, I would view those...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Identifying.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, let's do that specifically and take them off the list for ISA.

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

But not creating like a competition between, oh, what's better at this point in the ISA.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, anything you take off you'll take off because you believe something is better. So, you're going to do it one way or the other. I don't really care, we made this exact recommendation at the ASA Task Force last year and it was accepted by ONC so it's not a statement they've never seen before. We recommended a gradual crossover to the newer standards and that was accepted by the full committee. So, it's not a new statement but I'm happy to say it doesn't belong here.

I think that, you know, the thing it raises to me is the notion that the ISA has no process described whereby one manages this kind of a decision we discussed that...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

And that's the key.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

In our early calls, there is no process.

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Right, I think I would agree with you there, it's not the statement it's defining what it means. I believe the statement itself makes sense it's just how do we determine which come off the list and there needs to be some kind of structure around that.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I don't think...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

It...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I think we don't need to make a rule about taking it off I think we should try to take them off the list but I don't know if we have time, but instead of just saying future editions, why not this one? Why don't we try to thin it a little bit.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, we're talking...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

So, wouldn't this just be debated as we go, as we dive into each of the sections?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

I know I'm contradicting myself a little bit here.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Oh, no, yeah...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

But just kind of thinking through it.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Like I feel like it would naturally happen if there's something that should be brought up.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I hope it does.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

So, Clem you want to do it you just don't want to say that we're going to do it.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I would not have...saying it's replaced by necessarily...we don't have to wait to replace...get rid of some of these I don't think if they never existed.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

So, there's nothing to replace them perhaps and we could still get rid of them. And I just have a little concern about the use case not that it's not correct but I've been in meetings where everybody's personal message is a use case and I've been in meetings where they've said, we need a separate structure for complete blood count versus electrolyte panel, you know, there's no end to the splitting and dividing, and special interests that aren't necessarily useful across the spectrum of systems. So, it's just a little worrisome that that's an excuse for people to all have their own personal specializations or...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I think that's a challenge of good architecture is to figure out the proper level of abstraction for any particular problem and that's an extremely...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Difficult thing to get right but...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

There's no magic way to do it other than to have smart people work on it in a public...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, except to maybe say that they shouldn't be so narrow that you've got thousands of them or so narrow...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

But...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

That you can't...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

So...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Generalize across systems.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

When you can convince Stan Huff of that you come back to me.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, we've had arguments.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Me too.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

This is Kim.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Kim, go ahead.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Yes, so what do y'all think would be the next best step, should David the Subgroup take back the comments that have been made today and tweak them?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I actually think it's close and I don't know that...if he knocks off this one last paragraph and maybe a little caution on use cases it shouldn't be too fine, I'd be okay with it.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Clem, the...I'm okay with the deprecation thought being removed because I think it's, as we've discussed it's really part of a much broader issue about the ISA it's not just about API-based standards it's about all of the standards in there, how in the heck do you get something off the ISA. So, we can maybe highlight that as an independent point, take it off of...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yes.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

This API specific one that's...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yes.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I'm fine with that. The use case problem though is...I mean...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Just to mention it.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Do you think...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Just to mention it.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

That's...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Not to decide it, you know, just be cautious about too finely grained use cases because it makes it harder to cross systems.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

But use cases are driven by a need and you could have...I could easily imagine an extremely narrow use case that uses a single FHIR API call and achieves a useful purpose.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I could too, I'm just asking for just a counter that use case splitting forever is not necessarily always good and that it...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I don't think that belongs in this section, we can put that somewhere else.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, if you just said that...cautious about it, you know, excessive division into use cases or just caution about going too far and dividing.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

We might could put that in the scope section don't we talk about...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I think that use case granularity and the deprecation of older standards are two broad subjects that are the purview of the entire ISA...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

All right, all right.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

And they're not about APIs. I think if we're going to deal with them at all we can deal with them as part of the broader ISA.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

All right.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

In other words...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

I would agree with that as well.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

All right, so I think we're okay now.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay, so Rich and I will figure out a place to put those two topics in the broader...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I mean, I think, the question is we should find a place to put this subgroup, this particular content.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

That was my next question where does this go? Where does it fit in?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, you guys asked for the Task Force I assume you had a notion in mind as to what the output of the Task Force would do, we didn't address the where does it go. I suggested that there be a "new section" in, you know, some introductory part of the ISA explaining the, you know, these principles around API-based standards and then I think the specific use cases just get listed as use cases, you know, so SMART on FHIR if that's a, you know, well profiled use case of OAuth and FHIR then that would be in its own section just like any other use case. Right?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I think, Dave's idea is good to have this little section that highlights these issues.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I mean, you know, feedback to ONC and they can figure out where to put it. It's the explanatory power is captured in one place and then the details of the use cases fit the same pattern as everything else in the ISA. Does that make sense Kim?

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Let's go to the next slide and at risk of, you know, taking our careful agreement and roiling it I put these down as a non-exhaustive list of examples of the building block level specification as well as some of the use case higher level specifications and again, not exhaustive. So, the ones we enumerated would be FHIR for access to healthcare data contained in typical health IT systems, you know, that's what FHIR is about, it's about "gets" and "puts" of healthcare data defined in terms of what they call resources.

OAuth 2 and OpenID Connect for authentication and authorization handshakes, we know what those do and they come from outside healthcare but they've been re-profiled for healthcare.

I put HTML 5 for interoperability that requires any kind of user interaction and I put that because it's my belief that in the future interoperability will be far more than just exchanging data but you will actually need to embed an actionable user experience in the remote system and if you're going to do that you should do it with HTML 5, there's certainly no requirement that you do that, many interoperability's will not have user experience but some of them certainly will...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Dave?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Such as SMART on FHIR CDS Hooks...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, I like how you've changed that.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Okay, good.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

It connects it to the realities.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Good, good, good, thanks. And then there undoubtedly will be other building blocks that will emerge, I know for example there is something called UMA, which is User Managed Access, that's being profiled by an ONC sponsored group called the HEART Group that is an extension of OAuth 2 that allows for a third leg of control and management of the resource that's delegated to the patient themselves, to the

consumer themselves that may or may not become something that gets added to the building block list, so this is, I think, an open list.

And then I went through, just my own memory or mental awareness of the high-level use cases that are currently built on top of these building blocks, I'm sure there's a ton of stuff I don't know about that's going on, but first on the list that I'm aware of is the Argonaut Project which is I think 9 or 10 vendors and IDNs who have anted up money to pay for development of profiles that would allow FHIR and OAuth 2 to meet the 2015 Edition Certification Test even though they don't require FHIR, vendors decided to get out ahead of the curve and go ahead and use FHIR to meet that for the vendors that want to, of course you don't have to do it that way it's just a collaborative effort to try to get things moving faster. So, Argonaut Project has several implementation guides that they produced.

SMART on FHIR is a specification for Apps that can be plugged into workflow with the mix of FHIR and HTML, that's been specified and drawn out by the SMART Health IT Group at Harvard.

CDS Hooks is a new use case emerging from the same group that did SMART on FHIR but it extends the model to allow for asynchronous remote clinical decision support so that the EHR can interact with a remote decision support system in the background and then interrupt the physician only if it's necessary.

Sync for Science is an NIH funded effort that supports FHIR APIs through the patient portal that will allow a consumer to donate their healthcare data to the Precision Medicine Institute or Initiative, PMI, and/or other research initiatives.

Structure Data Capture is one of several S&I Framework projects that leverages, mostly leverages, FHIR to build the ability to remotely deploy data capture forms into workflows and then I'm sure there are many others that I don't know about. So, those are just again, listed as exemplars. Each one of these would become a use case in the ISA in my estimation.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

And David, this is Kim...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Would like each of these follow the characteristics, like should they be put in there like they have the other standards with the preconditions and limitations or is this still just more of an education standpoint of what some examples could be?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Kim, that's a great question, my naïve reaction is that they would follow the same paradigm as everything else, but I really should probably go and try it with one of them and see.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I didn't do that. That would be an interesting...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Experiment to go do.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I don't think...I think there's too much to digest. I don't know what most...I know SMART on FHIR but I don't really know much about any of this so I don't want to list them and I'm not sure that the process is a good process to include them here.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, we don't have a process remember.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, we do, we do to a degree, we have for a degree, most of the stuff was discussed in two years of previous meetings, not all of it, but, I mean, these are kind of new emerging things. CDS Hooks you just described and it is just starting and, you know, what is it yet, and are there competing ones that we should entertain or who is going to get mad if we bless this. So, I think these are...this is really going further than I would like to go with all the high-level ones, maybe a couple of them, SMART on FHIR is well known.

Structure data capture really has three versions so that gets confusing because there's a plain old one that came out of SDC that's XML and there's one in IHE and there's one in FHIR.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I think SDC is a mess, but it's out there and it was...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, well why don't we just say "for example" and pick two of them that maybe have some good...Sync for Science has been around for a while...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I think...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Maybe SMART on FHIR and Sync for Science and others to be determined.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Sync for Science is the newest by far. CDS Hooks has been around a year although it's...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

No Sync for...I read about it two years ago, Sync for Science.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well that was something different.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Was it?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Because the agreements for Sync for Science were just months ago.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, then maybe we shouldn't include that either then.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I mean, it's a major White House Initiative that's got nine vendors implementing it. I don't...I mean, you can say that it's new but people are doing it and they're doing CDS Hooks, we've got seven content vendors already hooked up with it, you know, SMART on FHIR we have...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, but you talk...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Dozens of...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

About to the broadness of our committee and what other inputs and how people might agree or disagree and if these are commercial things maybe they're commercial side doesn't think it's fair to them or whatever. I just think throwing these all out as something that's official at the very end here is not a good idea.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, you know, we have...

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

Well...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

They have a whole category called emerging standards that are in the ISA today, I would put these in that category, these are emerging use cases. I mean, that...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Yeah, David, I would...

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

So, David...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Agree with that.

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

Yeah, this is Eric Heflin, so, this...we did have a breakout workgroup but we didn't discuss these in our breakout workgroup so I'm uncomfortable with them being presented back to the major workgroup as items that were vetted by us because these last items here on bullets numbers 3, 4 and 5, 6, 7 at the bottom were...I don't know where this came from but they were not from our task group.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, we mentioned them. I used them as examples. I'm not sure I used every single one of them, but I mentioned CDS Hooks, I mentioned SMART on FHIR, I mentioned Argonaut, I mentioned SDC, I'm pretty sure I mentioned every one of them in the call.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, they weren't discussed.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Okay. They're examples. This ISA...I mean, we've got to figure out what the heck we think it is, if it's some political thing to be included on the ISA then you need a process, you need...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, you've been saying that...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yes...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I mean, we've got three weeks or so, so we're not going to get a big process. I think the process should be we shouldn't throw all these on the list for this particular committee, subcommittee, task committee.

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

So, when it came to the APIs we saw a need to dive into it a little deeper and pull it out into its own section because they're rapidly evolving and emerging so we wanted a little more guiding text. So, without examples how does that offer any additional information to people?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, the examples are FHIR or...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Like without...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

HTML, those are all kind of, you know, long-term husky things.

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

But I guess the point is, this is where it's under a subheading that says "rapidly emerging" so eventually we have to put things that are newer and we can put like subtext that explains that these are happening really quickly, they're getting a lot of industry momentum.

I'm not saying this list should be on there or not I just want to set it up so that we distinguish that this is a subsection in the ISA that will have stuff that is a lot newer but is just getting picked up at kind of lightning speed so we want to build that section out to meet that purpose and a lot of this discussion for this need came up because of FHIR and things on this list. So, I hear you...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

So, it's a very...

Christina Caraballo, MBA – Senior Healthcare Strategist – Get Real Health

Vetting the list more but...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Complicated Boston set of things, mostly coming out, you know, Tripathi's group, etcetera and I just don't know if we're being fair to the world with such a small little group here picking names to put on the list.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

But isn't that true of the entire process this small little group is deciding what's in the ISA? How is this any different from...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, things we've all heard...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

The entire rest of it, you don't like CDISC other people do. I mean, what's the difference? It's either a list...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well I think...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Of recognized...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

CDISC is not about...it's not an ANSI approved organization for one.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

It doesn't have to be.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

According to you.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

It's not really just this group that decides it either it goes out for public comment. I don't know what the ONC does behind the background, we just make recommendations.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Look, yeah, the Standards Committee reviews it, I mean our recommendations go to the Standards Committee and if they are supportive of it those recommendations go to ONC. So, there is in fact a process. Look I don't really have a problem with the idea of including a non-exhaustive list of examples. I think it's educational.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, if we...

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

And I think...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

...

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Just a minute Clem I'm trying to say, that we're going to talk in the next chart about kind of what is the criteria for standards from our last call and so that would really guide I think what ultimately should

appear on the list, right? I mean, but as examples, I mean, I think these are fine. I mean, I think the SDC one I agree with you is a little complicated but I think the rest are really informative for the audience that we're talking to.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

And I...you know I think it would be...this is David again, I think it would be...I'm assuming that other input would be sought, you know, one of the things that we've recommended earlier is the notion of linking the ISA to the showcase for actual ongoing projects which I assume would enumerate quite a large number of other things that are happening out there some of which may live, some of which will disappear.

I think the ISA should expand one's awareness of what's going on so that you can be sure you find the right thing. I don't think it's an endorsement per se that anything ever will happen given the number of standards that are on the ISA that are dead ends.

Michael D. Buck, PhD – Senior Director Biomedical Informatics – New York City Department of Health and Mental Hygiene

This is Michael Buck, I'll just comment, I mean, I think, this is the type of thing that I would want on the ISA. I know I'm coming at it from the public health space but we try to stay abreast of what's going on so we can leverage these standards for our work and knowing about these type of projects is what has made it easy to, you know, pursue funding and other options and I think, you know, I hadn't heard of Sync for Science but now that I've heard about it it's something that I can yet use again and so this is the type of thing I would hope that the ISA would list as far as from our experience.

Mark Roche, MD, MSMI – Chief Medical Information Officer – Avanti iHealth

This is Mark I'm looking at the second bullet point on the example lists, are there any examples from the industry where industry has developed certain APIs that can also be used as examples?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Could you repeat your question it was garbled a little bit and I didn't get the last part about it Mark?

Mark Roche, MD, MSMI – Chief Medical Information Officer – Avanti iHealth

Sure, so the question was, do we have some examples on APIs that are developed by the industry by vendors that we may want to include?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

You mean by the healthcare industry or outside of healthcare?

Mark Roche, MD, MSMI – Chief Medical Information Officer – Avanti iHealth

Actually both, healthcare and outside of healthcare.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, the current state...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

It...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

In healthcare is that most of the vendors have proprietary APIs which is, you know, APIs they just invented on their own and they have customers who use those proprietary APIs in a variety of ways, what the hope is with FHIR is that those proprietary APIs would give way to standards-based APIs and that's what the Argonaut Project is trying to do is to, you know, push the standard forward to where it could be equivalent to the proprietary APIs and we're using just the test case of the 2015 Edition Certification Requirements as the, you know, definition of the goal knowing that, you know, some vendors have gone far beyond that with their APIs but you've got to start somewhere so start with that regulatory test of the certification edition. So, that...

Mark Roche, MD, MSMI – Chief Medical Information Officer – Avanti iHealth

Are there examples outside of health IT? I mean, I'm sure there are, I know there are.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I mean, you know, Apple has a set of APIs that it's App developers use, Google has a set of APIs, Salesforce.com has a set of APIs, there are many API-based ecosystems in deployment...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

That...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

For the most part they're not standards-based because they're competing industries. Healthcare has got a little bit of a different problem.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well there's actually...

Mark Roche, MD, MSMI – Chief Medical Information Officer – Avanti iHealth

Well...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

An interesting thing happening in HL7 now that it wants to communicate somewhere in the order of 20,000 different devices they put out patient's stuff through both Apple and Google. I don't know how far along they are but they have a very ambitious goal to create an interface system that can deliver this data from source instruments to destination systems and I don't think it's any...it's not necessarily built on this set of systems.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

And there's also...

Susan Matney, PhD, RNC-OB, FAAN – Senior Medical Informaticist – Intermountain Healthcare

So...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

A group called the, oh, shoot what is it, there's a large group of provider organizations that have banded together with funding from West Health to create standards for device connectivity, you know, bedside devices that's not...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, that's...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

API-based standard at the moment it's message passing.

Susan Matney, PhD, RNC-OB, FAAN – Senior Medical Informaticist – Intermountain Healthcare

So, this is...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

That's also HL7-based, I'm on the committee and I think West Health has backed out of some of it by the way, but...

Susan Matney, PhD, RNC-OB, FAAN – Senior Medical Informaticist – Intermountain Healthcare

Well...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

It's the Center for Medical Interoperability.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

It moved to Vanderbilt and there was some upheaval on that.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, yeah, Vanderbilt is hosting it.

Susan Matney, PhD, RNC-OB, FAAN – Senior Medical Informaticist – Intermountain Healthcare

Well one of the...this is Susan Matney and one of the things that I was surprised that I didn't see was APIs to like the NLM is developing APIs for VSAC and RxNorm so there's RESTful web and SOAP web services that you can hit RxNorm and get all the properties and classes, and I mean, this is messaging and for structure, but there's also APIs around the content.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I'm glad you reminded me of that Susan I should have brought that up.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I think that's a good...another building block you could use those in conjunction with these actually. I think...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, let's get off the dime, I guess we should...we've discussed it a lot, someone decides what we're doing.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

There is one and I don't know how this will fit into it but I'll share it and maybe somebody else can figure it out was what Mark said with the proprietary APIs, at the ONC annual meeting at the, I think it was called the price transparency one it was about getting the price of the medication at the point of care and there is a vendor that has developed a proprietary API to provide that same information that is seen at the pharmacy so I don't know if that example has something in it that could help with what y'all are coming up with David but I'll share it and let y'all think about it and I could give you more information offline about it if you wanted it.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I think that's a good...that's an example of how the ISA will have to think in the future as it becomes aware of additional APIs that are being exposed, you know, that's one where there's a competing standard from NCPDP and, you know, the market is going to have to figure out who it wants to follow.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Well, they used some of the NCPDP standards with it so, again, I'm not the API expert but maybe it's part of the building blocks like you're talking about but...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Maybe it could be an example of something for people to learn from I don't know.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, no, I totally agree. If that's the one that's based on NCPDP then the other one is one based on the so called Telecom standard.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

That's it, that's it, the Telecom standard is in NCPDP so yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, they're not quite the same, but they compete at some level. But, anyway, yeah, those are APIs that are not based on FHIR but which could, you know, serve valuable purposes and I would suggest that get listed. I don't think our little workgroup is going to produce a list of all the APIs but our Task Force as a whole and the rest of our tenure in the second half maybe we do start to be more exhaustive about listing things although we'll need input from a lot more than just this group of experts.

So, I think just to finish up my section I think we decided we would strike the deprecation thought. I'm comfortable on this second slide striking the SDC thought if it's a little messy and complicated. I think, you know, maybe add the phrase emerging, high-level emerging API use cases to make sure people

understand these are not yet proven but they are interesting and they do have substantial vendor support, Argonaut, SMART on FHIR, CDS Hooks and Sync for Science all have, you know, Cerner and EPIC both doing them amongst many others.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, Dave, let's print it then, let's do it.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Okay. All right, Rich back to you and Kim.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Okay, back to Kim.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay, so the next slide is the best available which Rich did up a summary for us, so Rich I'm going to let you walk through these next couple of slides.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Yeah, okay, so first of all thanks for the feedback on the last call I think we made some progress in this area, hopefully this gets close to capturing it. So, just to read them through real quickly in general the idea is to replace the notion of best available with the notion of recognized standards which are...the foundation of which are voluntary consensus standards, there's a particular definition of that which we've referenced and related implementation specifications.

And so basically what we're saying here is that to be listed in the ISA the recognized standards should be approved by the governing standards development organization, some don't have, you know, an SDO per se but whatever the equivalent governing body is it's either a trial standard for pilot use or approved for production use. So, that there is some clarity there.

And the idea should be that the ISA serves as a filter to identify recognized standards which may in the future be considered for a regulatory process and that those should be dynamically linked in the ISA to the applicable standard specifications and governing body statements regarding the individual standards maturity and I think implicit in that comment was a view from the Task Force that, you know, we should be holding those standards bodies accountable for accurate portrayal of the information regarding maturity and, you know, kind of breadth of these. So let me stop there and see if there are comments...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, what about new ones being introduced that collide with existing ones?

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

So, Clem are you going to recommend that we should deprecate those, just kidding, I'm just kidding.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, no, what I'm specifically...CDISC has a very...CDISC through their...they have all their specs in the current one without selection. HL7 didn't throw all 65 or 80 of theirs in, number one.

Number two, is one of them is vocabulary which contradicts and it's mixy because when they limit it to federally, you know, FDA or regulatorially mandated research I think it works, I think their stuff is fine. But as they get broad they're sort of kind of proposing...or it could be thought they're proposing to use all their stuff for healthcare which doesn't make sense to me in general and it will unseat the progress that has been made with LOINC and RxNorm, and SNOMED because they have, you know, colliding vocabularies for all of that and they're different structures not only are they different, you know, in their content but structures and I think that will defeat some of the things we were trying to do in terms of getting communication and interoperability.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Now would that be covered by the subgroup that you're chairing to take a look at research standards?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Ah, well, it could be but, we haven't assembled yet, yeah.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

I'm just wondering if we should defer that question for that subgroup to give us some feedback.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Okay, okay.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Hey, Rich, I'm wondering if the recognized standard best available standard section would cover the current notion of emerging use cases and if not do we just call that out as a separate section. So, in other words there may be emerging things that they would like to describe that don't fit yet the criteria listed here. It's really a question of what we think is emerging.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Yeah, that makes sense. Inside of the model that would be what we just finished talking about right?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, but I would say, you know, maybe that's...so the ISA would include recognized standards which meet the criteria on this slide and also emerging standards where there is just deemed to be enough interest that they want to call your attention to them but they might not have progressed to the point of being a trial standard for pilot use. I guess it depends on what equivalent means.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I mean...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Does a connect-a-thon count as a trial standard for pilot use? I don't know.

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

So, David, this is Eric Heflin, I think I was the one that suggested that in particular and one example of that would be the ONC's, you know, various processes such as modular spec creation and so on that's not really technically an ISO approved SDO or Standards Development Organization but yet certainly has weight in our country.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, no, I have no qualms with that category "trial standard for pilot use" being one of the criteria that you can meet the notion of being a recognized standard I'm just afraid that some of the emerging standards that we've been talking about might not meet that criteria and so the question is should we drop the whole notion of emerging standards or should we expand the document to say, some of these standards are not yet "recognized" but they are interesting and important. I don't know.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I had the impression emerging was different than recognized but they're interesting and important.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I guess I'm saying let's explicitly acknowledge that emerging is different from recognized.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Because right now the whole document is called best available right? It applies to the whole document.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

And we're saying, change that to recognized so that would apply to the whole document except now we're saying emerging really might be a separate category.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

So, let's put that in our definition, this is Eric, put that in our definition that recognized has a threshold including that it is being developed by an SDO or its equivalent and its met the trial standard or its

equivalent gate but that emerging can actually include broader standards that do not meet these criteria.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I'm happy with that.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, I am too.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

And, you know, in an ideal world these emerging standards would use recognized standards as their building blocks so the gap to getting them to being approved is more narrow, is shorter.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

That's the whole theoretical approach of API-based.

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

So, this is Dan, I'm interested in other folks opinion on whether...how the sort of collision might occur between this like the end section which is sort of projected future editions and then this more broader sort of statement about we want to sub-categorize the listed standards kind of on the spectrum from emerging to sort of full production use. It isn't totally clear to me whether the projected editions are there because the use case is still forming and/or the standards themselves are still forming or some combination of that. So, curious on other people's thoughts there.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Do you mean what we've been calling emerging standards is that what you're talking about?

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

Well, so as it exists today, right, there's kind of the front part which is the named, you know, best available standards then there's the back part which is like projected editions.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

And then within both of those, you know, they list...they name standards and when we're talking about sort of emerging standards in this context it seemed like where we were talking about that was in the

collection for when you name a standard you're going to sort of say it's maturity level, independent of that front part or the back part, any time you name a standard you sort of describe where it was.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Oh, I see, yeah.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

You're saying, Dan we still have the problem of what we do with the current back part?

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

Right, meaning like I could see like there are interoperability needs that are in the front part and we might want to put an existing standard there and then list an emerging one sort of right underneath it, but then there's that other, that back part which is sort of the, you know, you're on deck kind of thing and it isn't clear if that's just a categorization of the use case that's on deck or still, you know, percolating or it's the standards themselves are still sort of under some discussion. They seem to be related but not completely independent.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

So, this is a little bit...I think you've expressed a good question that we were trying to address with this notion of specifying these things on multiple levels. So, you could imagine an emerging use case like say, I don't know SMART on FHIR which is based on standards some of which are quite mature like OAuth 2 and HTML and some of which are still emerging like FHIR but the aggregate of those three together is very much still emerging.

So, I think you need to specify the lower level standards maturity levels, you know, specifically and then the use case that weaves them together may in fact be very new even though it's built on top of, you know, a solid foundation. I don't think there's a contradiction there that's kind of the point of multiple levels of describing the, you know, maturity. Does that make sense?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I...

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

I think so but does it mean you would always put the sort of SMART on FHIR use case first in the projected editions and then when it's over there then you would still, you know, have your breakdown of like base standards and you'd say that this is really mature and then you'd have these other parts that are emerging and then like in a separate round it would sort of get bumped up to the, okay, it's now a fully whatever, fully recognized thing...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

And that whole block would then move to the front part.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, yeah and I wouldn't repeat the...I mean, if you take an emerging use case and it's based on a standard that's already been enumerated in the first part you'd just reference it, you would say, you know, leverages FHIR, you know, and there's a link to that part of the ISA to describe FHIR.

What you might, I think in the real world, discover is that the part that is new are the profiles on the core standard. So, it may use FHIR but it may have some un...you know, it may have a new set of profiles that are necessary to make FHIR work properly for that use case. So, that's why again these things are tricky because the core standard like FHIR isn't...that's not a necessary specification you have to profile it. Again, nothing new here we've been doing this forever the difference is we're starting with pre-agreed core APIs and in the past we made it all up from the bottom.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Yeah, if I...maybe I could make a suggestion here, number one, Dan I think your subgroup should get a chance to consider this and make recommendations back to us and, you know, as it relates to structure.

The way I was thinking about the discussion earlier was that emerging was its own kind of concept and the projected editions might be called white space, might be research which is a projected edition not really...you know, partially covered now but not really covered very well that, you know, we're going to take a look at and there's plenty of other white spaces we identified in one of our early conversations.

So, those are the...I think the two dimensions and why don't you tell us how they ought to be put together back into the ISA.

Daniel J. Vreeman, PT, DPT, MSc – Research Scientist – Regenstrief Institute

Okay.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Okay, so we've got your...so we've got your feedback on this chart maybe if we could go onto the next slide. So, this was something that has come up from time-to-time. I wanted to make sure that we got some time for the Task Force to weigh in on this and this was the notion of existing standards that are actually out there, they're actually being used in the real world today where, you know, the ability to make sure that we're using the best versions of those for...but what's going to allow for better national scale interoperability are there improvements over what's being done today that are out there that we should be pointing to and referencing as part of our recommendations.

So, I wanted to give the Task Force a chance to take a look at this. I did kind of a quick survey around to try to identify ones that I thought were applicable so that you weren't staring at a blank page, but really this is the first time for the Task Force to think about this specific list and this concept organized this way and just wanted to see if we could get some feedback on, you know, are things like this, like a Consolidated CDA 2.1 and its related companion guide is that going to be helpful to improving, you know, kind of backwards compatibility from Consolidated CDA 1 if everybody does that and does that well or the HL7 structured document examples, implementation examples, that would be helpful if folks were to generally use them and so on.

So, that is the point of this chart so without going into too much of the specific items maybe we can just get feedback. Is this framing one that makes sense to you all or what are your thoughts on this?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Rich is the thought that we would go through the existing ISA and come up with additional members of this list?

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

We could do that. I mean, I guess what I wanted to make sure that we accomplished was that to the extent that, you know, we know that there's some, you know, challenges in various parts of the interoperability that we're relying on today that's, you know, federally mandated that better constraints or better definitions, or better implementation specifications work that people are doing in the real world right now could contribute to better, you know, kind of cross industry use of those standards and so my thought was to try and target those that the Task Force thought were, you know, applicable for ONC to consider bringing into the ISA to ensure that, you know, we're not stuck in...part of the problem with regulation is you get stuck in versions and, you know, they're not necessarily the best and we had that feedback early on. So, this is an attempt to address that concern.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well I think...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah and my question was really, you know, this list looks good but I would probably want to spin through the whole 67 pages thinking about this question to see what else might be on there, because this...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, when I'm asked to look at something I always like to see it first. I mean, you know, you've got...it might be quite reasonable but you're asking us to make a judgement on something that we're...we don't know what it is exactly and there is one that's not going to be balloted until September are we doing a pre-ballot on it is that what it amounts to? Is there any way we could quick get a look at these things to see what they really say?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, these are links, right?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

They can be whacko or they can be good.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Are these links? You have them underlined. Yeah, they're links.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Okay, but I didn't have...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Should we give the group more time to look at them and have...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I think...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Because we're 10 minutes away from ending.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

I mean we could be very positive then instead of just winging it.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Because we have 10 minutes left so we could have the group look at this and then come back.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Oh, this is not 10 minutes of reading.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

No, no, no understood. So, yeah, Kim I think that's a good suggestion.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

So, look, I mean, for the purposes of the Joint Committee meeting on Thursday we can say that we're going to be making some recommendations in this area and that it's under consideration and we'll, you know, give the group a chance to take a look at these links and give us their feedback.

What we really want is, you know, if there's a short list of, you know, improvements in implementation guides and specifications that would help us operate better together let's see if we can get that into the ISA.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Okay and this structured document which one is it? Is that the FHIR or is it the IHE, or is it...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

No, it's the CDA example Task Force and it's just a long list of detailed examples for how to use CDA properly.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Oh, the first one is CDA it's not SDC?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation
Right.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine
Okay.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation
Right.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine
Okay, I mean, my intuition is that we would want to be supportive of all these, but I just thought...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation
Yeah.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine
If you're asking me to bless them I ought to read them.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation
I notice they even have one for EKGs Clem.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine
Really, now I'll really be happy but it might be whacko too.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation
Yeah, it's...

Richard Elmore, MA – President, Strategic Initiatives – Allscripts
Okay, so if it's okay with everyone what we may do is to just, you know, kind of put, I don't know we'll put draft or something across this, somehow we'll indicate that it's in the formative stage as a recommendation but they'll at least be able to get some visibility kind of the nature of the thinking that we're doing and we'll have time then in a subsequent call to just get any additional feedback on what you think should be on this.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.
And then for the next couple of slides, 11 through 14 those are ones that we had gone through before and we had the one call I think it was on June 2nd and I said I would go update them from the comments from that so maybe if everybody could look through those and e-mail back any suggestions we could update it and then have a quick go through on the next call for those also.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts
So, Kim the next section, right, these are all recommendations that we planned to preview with the Joint Committee on Thursday is that correct?

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

That's correct and of course all of these like Rich said are drafts, but I did update them based off our group call on June 2nd so I just want to make sure everybody is in agreement with the language that I used and how I worded things.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Are you showing them now, the slides?

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

I am not and I was just looking at...I had it opened...

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

If we can go to the next slide, please.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

So, it would be 11 through 14 for everybody to look at and give feedback before the next call. So, it's...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I like that first one.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

And then the next slide was the ISA structure. I think I added a sentence right there on the end, ideas include a creative Wiki linking the sites like VSAC or other agencies which evaluate and/or list standards.

The next slide the characteristics...oh, the last bullet was the one that had a lot of discussion. So, this one actually had a different ending where it had the word "speculative" if y'all remember that conversation. So, I reworded it to say the ISA should add a category under standards process maturity to include categories of ballot and development and then this is the new part, that could reflect emerging standards which maybe in rapid development and Christina that was one of your suggestions from another section but I pulled it in with this because it seemed to fit in with this piece of it. So, if y'all could look at that and see if y'all like the wording for it.

And then then next slide...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Hey, Kim, one suggestion on this current slide or the previous one was the adoption level bubbles should be more qualitative in nature than quantitative, I would add something like when possible.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay, when possible, oh, that's right I changed that one based on your feedback David, thank you for pointing that out.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Okay.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

I took out the quantitative piece and put that.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, because not all...it won't be possible to do quantitative on everything that would be an immense amount of work.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay. Yeah, so any comments like that if y'all could e-mail them back due to our lack of time right now that would be great and then we could have them pretty much ready to go for the next call. And then the next slide...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, Kim?

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

I think is one that Eric started putting together and then I added in some bubbles, some bullets underneath, I'm getting my bubbles and bullets confused now, underneath with what he had, he had the first bullet and I added in two more bullets to kind of pull in some of the conversation that I heard everybody and again...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, I think...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

I know we don't have enough time to go through them but if y'all could read them and get feedback to us that would be great.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, could I just get some clarity what I read mostly as being search tools not the matching thing that you see in some products to try to get a...look at a lot of fields statistically to decide what's close and give a score to the closest. I think there's two different dimensions to this matching. I'm just querying is I don't think of as the key problem matching it's important.

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

So, this list, Clem, this is Eric, is designed to talk about the interoperability component of discovering and finding patients across organizational boundaries, it indeed is not intended to address searching inside a company nor is it intended to address the algorithms deployed behind those entities, it's to talk about only the interoperability of those attributes and the searching.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Oh, that's helpful maybe that should...

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

It's basically an API. So, basically this is intended to speak to, here are potential APIs, plural, for identifying patients across organizational boundaries.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Using this standard...

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

Does that make sense?

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah, it does.

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

Yes, using standards.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

It would help to have that clarified in the text.

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

And Kim I could send you some...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay.

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

An update if you want, send me this raw slide I'd be glad to update that if that would be helpful to you.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay, that would be great and then...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I mean...Eric, do we want to think about...is it worth thinking about standardization of the matching logic itself? I know that's a proprietary space for a lot of people but it leads to all sorts of uncertainty about what you're going to get.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Yeah.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

I thought the...

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

The White Paper down at the bottom that I had a hand in authoring, the Sequoia paper, actually does mention some potential not necessarily algorithms but at least for practices that may help raise the bar without delving into vendor specific details or proprietary approaches so perhaps that would be a viable thing to include within the scope, but to answer your question...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, the other thing...

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

I personally feel including algorithms themselves probably is a difficult thing to include with scope without, you know, engaging upon vendor specific algorithms which I think we are seeking to avoid.

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

Well, there are published papers...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Hey, everybody...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

We did some that gave the algorithms but what I really would like to highlight is what we should aim for is to point to ONC or the government at allowing some fields that would make this more accurate or at least the issue of...recently we're seeing that a four digit social security is called...

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

So Clem...

Clement J. McDonald, MD, FACMI – Director, Lister Hill National Center for Biomedical Communications – National Library of Medicine

An identifier, well, there's only 300,000 people per payer and well, I don't know where that's coming from but that really screws you.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Everybody we're out of time and we need to go to public comment so why don't we put this slide as a topic for more discussion next time and then if y'all could give us any feedback beforehand I think that would be helpful. So, Michelle, I'm going to turn it over to you for the public comment.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Thank you, Kim. Lonnie, can you please open the lines?

Public Comment

Lonnie Moore – Virtual Meetings Specialist – Altarum Institute

Most certainly. If you are listening via your computer speakers, you may dial 1-877-705-2976 and press *1 to be placed in the queue. If you are already on the telephone and would like to make a public comment, please press *1 at this time. Thank you.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

While we wait for the operator there were quite a few comments left in the chat today that we will e-mail out to the group following today's meeting.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Uh-oh.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

And there are no public comments at this time. So, thank you, all.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

I hope it's David's section.

Eric Heflin – Chief Technology Officer – Sequoia Project/HIETexas

Bye, everybody.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Have a great rest of your day.

Kim Nolen, PharmD – Clinical Informatics Medical Outcomes Specialist – Pfizer, Inc.

Okay, bye.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Bye.

Richard Elmore, MA – President, Strategic Initiatives – Allscripts

Thanks, everybody, bye.

Public Comment received during the meeting

1. This is David Tao from ICSA Labs. I suggest that one prominent example that can be added to the High Level API-based use cases. DAF Phase 3 pilots, which will use FHIR in research pilots through PCORI networks.
2. Jorge Ferrer: FHIR comment: A strong focus on implementation – fast and easy to implement (multiple developers have had simple interfaces working in a single day) MOSTLY TRUE -- There is a very strong focus on implement. A "hello world" application can be up and running in a very short

time. When you factor in data mapping, it is going to take longer. Multiple implementation libraries, many examples available to kick-start development TRUE -- like HAPISpecification is free for use with no restrictions TRUE Interoperability out-of-the-box-- base resources can be used as is, but can also be adapted for local requirements MOSTLY FALSE -- only syntactic interoperability (e.g. parsing) is available out of the box. To achieve semantic interoperability, where one application actually understands the information from the other application, you need to layer on agreements about vocabulary, value sets, cardinality, and more. Evolutionary development path from HL7 Version 2 and CDA – standards can co-exist and leverage

3. Jorge: FHIR comments: Conversions from CDA to/from FHIR, or V2 to/from FHIR are under development, but there are mapping problems. Strong foundation in Web standards-- XML, JSON, HTTP, OAuth, etc. Support for RESTful architectures and also seamless exchange of information using messages or documents. RESTful exchange, yes. But I don't know anyone using FHIR for messages at the moment. Documents are better expressed as CDAs. There is no ontology in FHIR, whatsoever. Formal mapping (to V3) is not useful -- it is there only to placate HL7 old guard.
4. Alejandro Medrano: What if any implications will result from these standards for nursing informatics? What are some potential impacts of these standards on a national level?