

**HIT Standards Committee  
Clinical Quality Workgroup  
Transcript  
December 3, 2013**

**Presentation**

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

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 Clinical Quality Workgroup. This is a public call and there will be time for public comment at the end of the call. As a reminder, this meeting is being transcribed and recorded, so please state your name before speaking. Also as a reminder, if you are not the person speaking, if you could please mute your line it would be appreciated. I'll now take roll. Marjorie Rallins?

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

Present.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Danny Rosenthal?

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**  
Here.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

David Baker? Keith Boone?

**Keith Boone – System Architect – GE Healthcare**

Present.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Anne Castro? Chris Chute? Jason Colquitt?

**Jason Colquitt, PhD – Executive Director of Research Services – Greenway Medical Technologies**

Present.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

John Derr? Bob Dolin? Floyd Eisenberg?

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

Present.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Rosemary Kennedy? David Lansky? Brian Levy? Rob McClure?

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Present.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Galen Murdock? Gene Nelson? Philip Renner? Eric Rose? Joachim Roski? Randy Woodward? Kate Goodrich? Kim Schwartz? And are there any ONC staff members on the line?

**John Feikema – Coordinator, Standards & Interoperability Framework – Office of the National Coordinator**

John Feikema from S&I is here for the first hour.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Thanks John. I think Julia Skapik's on as well.

**John Feikema – Coordinator, Standards & Interoperability Framework – Office of the National Coordinator**

I know she's coming, she was just finishing another call I was also on; she'll be here if she's not already.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Good.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Thank you.

**Keith Boone – System Architect – GE Healthcare**

And this is Keith, just wanted to let you know I'm only available for the first half hour.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Okay. Thank you. And I'll turn it back to you Marjorie and Danny.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Great, thank you Michelle. So, I will be walking you through the agenda. And can you please pull up the agenda slide? So we've got five – including me we have six people from the workgroup, so hopefully this conversation can be fairly dynamic. So, can you actually pull up the agenda PDF, that first one, that's 71K. Okay. So, the purpose of this call is we are discussing asks from the Meaningful Use Workgroup on decision support and medication adherence. We recently got an updated list of questions, which is that third document you can see over there on the left, which is the Meaningful Use Workgroup Stage 3 Clinical Quality Questions. And they're asking us now – we have more specific questions in areas of decision support, medication adherence, case reports and finally registries.

Given the robustness of our prior conversations, Marjorie and I's gut is that we will have sufficient time to probably just address the clinical decision support during this call. So, what I'd like to first do is get some clarification on the specific questions around clinical decision support, make sure that everyone – that the six of us really understand what's being asked of us. And then we will be handing it over to Aziz Boxwala and Bryn Rhodes from Health eDecisions, to give us a little bit of a background and update on Health eDecisions within the context, hopefully, of these three questions that we're being asked.

**Keith Boone – System Architect – GE Healthcare**

Okay. So, if I could ask a favor. I did a little bit of looking in to the specific questions that came in the document on Friday. And so I'd like to be able to provide that feedback before I need to drop off. I know Aziz and the rest will do a great presentation, and I'll try to keep my remarks short on the information that I dug into, based on the third PDF.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Got it. Can you please open up –

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Sorry, can you make sure you state your name before speaking. Was that John?

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

I believe that was Keith.

**Keith Boone – System Architect – GE Healthcare**

No that was Keith, sorry.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

That was Keith.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Thank you.

**Keith Boone – System Architect – GE Healthcare**

My apologies.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

So Keith, how much time do you think you'll need for your comments?

**Keith Boone – System Architect – GE Healthcare**

I don't think I'm going to need a whole lot of time, my comments were basically some discussion around current activities that are going on in HL7 around clinical decision support and then on – a little bit on SDC, structured data capture, activities and RCKMS. So, I reached out to some people that I know who I know would have engagement in SDC and RCKMS to find out some more information. And I want to bring that back at least – those two things back at least to the committee and then just update them on some of the activities that are going on in HL7 around HeD and HQMF.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Got it and –

**Julia Skapik, MD, MPH – Office of the National Coordinator**

And Keith –

**Keith Boone – System Architect – GE Healthcare**

I think we've already covered that topic, so it's the last two topics really that I want to make sure the committee's aware.

**Julia Skapik, MD, MPH – Office of the National Coordinator**

Keith, this is Julia Skapik from ONC. Do you have any of this compiled or written down that you could send us, so that we could put it into the comments for the workgroup or should we just take notes?

**Keith Boone – System Architect – GE Healthcare**

So, unfortunately no, because this was stuff that I was getting through email. I'd be happy to write something up briefly, post the meeting, but I do have another thing I have to get to in half hour.

**Julia Skapik, MD, MPH – Office of the National Coordinator**

Okay, I'll try to take notes too, so we can fill in the gap.

**Bryn Rhodes – Owner - Database Consulting Group, LLC – Health eDecisions**

And this is Bryn, just real quick. I sent an update for that slide presentation that has far fewer slides and specifically culled to focus on the questions in that first bullet. So if we can get that replaced while Keith's doing – giving his talk that would be great.

**Julia Skapik, MD, MPH – Office of the National Coordinator**

It's from 20 minutes ago, is that right?

**Bryn Rhodes – Owner – Database Consulting Group, LLC– Health eDecisions**

Yeah, I just sent it right before the meeting.

**Julia Skapik, MD, MPH – Office of the National Coordinator**

Okay, I'll send it right now.

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

And, this is Marjorie, Keith, for your comments that you're going to make, will those be in the context of the questions that we have in the agenda? Because they further clarify the questions that came in the spreadsheet that went out on Friday.

**Keith Boone – System Architect – GE Healthcare**

Let me see if I actually have that agenda up on my screen, no, I don't have it there –

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

Yeah, we want to make sure that we focus the discussion today within the context of those questions.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

I think perhaps because – I think the case reporting question is for the next meeting and I think the structured data capture comments that Keith might have –

**Keith Boone – System Architect – GE Healthcare**

Yes, those are actually both on the case-reporting piece –

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

Okay.

**Keith Boone – System Architect – GE Healthcare**

– so if we're going to be discussing that on our next meeting, then I'm perfectly fine with holding my comments on that and actually being a little bit more prepared. I wasn't sure, given the frequency of –

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

Not a problem.

**Keith Boone – System Architect – GE Healthcare**

– the updates that were coming out, what we were actually going to be discussing today.

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

Right. So with that Danny, I'll turn it over to you again to continue.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Yup. So, I'll be first asking for some clarifying questions for decision support, and then Keith, after we have some feedback from Michelle, who's going to hopefully clarify some of these things, if you have any comments specific to clinical decision support in the context of these specific questions, please do let us know.

So, if you look at the agenda, the three questions that we're trying to tackle. The first one is around capturing data to use for clinical decision support, where in the systems, what kind of data elements and the usability of current standards. We're then going to jump to the third question there, which is, can external data be used to trigger decision support? And then lastly we're going to go back up to the middle question, which is, how feasible are current certification criteria? So – and then Michelle's been kind enough to interpret some of the questions from the Meaningful Use Workgroup. So Michelle, the first question is capturing data for use in clinical decision support. I think that most folks on the workgroup understand what's being asked for on the usability of current standards, but can you elaborate a little bit more on the "where" in systems and what kind of data elements. On those two particular pieces, what is the Meaningful Use Workgroup asking of us? Are they asking us to say how good are the standards at defining where in systems and what kind of data elements or are they asking us to actually give feedback on where in the systems should we look and what kind of data elements should we be after?

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

It's the former. So to some extent they didn't want to be too specific, and they've had a lot of conversation about clinical decision support, so just to take a step back.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Um hmm.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

In the grid that was sent out, you all will notice that there's a column that says Former Stage 3 Objective and then Updated Stage 3 Objective. So Meaningful Use Workgroup had presented to the Policy Committee back in August and at that meeting, the Policy Committee had said, things are too prescriptive and providing too much detail. So based upon that meeting, the Meaningful Use Workgroup went back, kind of refocused the way that they're thinking about recommendations and tried to take out some of the specificity and not be overly prescriptive, because they don't want to stifle innovation. That being said, the thought is that there are certain things that need to happen in order for CDS intervention to be able to enable providers to calculate quality measures and manage their patient populations in a way that they're actually able to improve upon outcomes, which is supposed to be the end goal for Stage 3.

And they really – we're focusing on things for Stage 3 that should have more importance, if you will, CDS is an area where they really want to focus heavily. So they were struggling a bit with how prescriptive to be without stifling, but also they want to be able to push further on those that may not have the functionality within the system to do some of the things that they believe of clinical importance to be able to do. So I know that's a long-winded background, but I just want to give you that background before we get into the discussion. But to your specific question, they wanted to know where standards are as far as so for example, in the past there have been issues with blood pressure. I think most of that has been resolved with QRDA and Stage 2, but they want to be sure and that's kind of why they're leaning on this group.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Got it. So, let me see if I can restate that in that first bullet point. The question to our group is, how usable are the current standards –

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Um hmm.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

– for capturing data to use in clinical decision support? More specifically, defining where in the systems and what kind of data elements can be captured using those standards.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Correct.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Does that get it Michelle?

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

That's perfect, much more eloquent. Thank you.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Okay, so that's the first question that we're going to tackle and then just one quick clarification before we jump into that. On that third bullet point there, it's asking the question of can external data be used to trigger decision support based on registry information? That first external data, is that referring to the registry information?

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Yes.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Meaning – okay, so that one should read, can external data, e.g. registry information, be used to trigger decision support?

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Correct.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Question mark, right?

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Um hmm.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Okay. Any further clarification needed by other folks on the phone call? Okay, hearing none, Keith, do you have any feedback in your remaining 10 minutes on those two questions, the usability of current standards, particularly in defining where in systems and what kind of data elements? Or the second question is around triggering decision support off of registry data. Keith, are you muted?

**Keith Boone – System Architect – GE Healthcare**

Yes, I sure am. So on the first topic, for capturing data for use in clinical decision support in terms of the standards. I know in the Clinical Decision Support Consortium work there's been some effort to use the HL7 CCD basically using the HITSP C32 out of Meaningful Use Stage 1 to capture data and to be able to exchange that data with a decision support engine that is able then to return appropriate interventions for a patient. And that came out of the work that Blackford Middleton was doing while he was at Partners and I think that work is still ongoing, I'm not su – I haven't kept up with the current activities of that group. And I believe Ken – also had some experience taking information out of the HITSP C32 and converting it into sort of a vMR, virtual medical record representation, which is one of the key components of the HeD specifications.

So I think for a lot of the core data elements, things like vital signs, things like problems, medications, allergies, procedures and some of those things that you see in the meaningful use data set, there's some ready availability to do clinical decision support. Example such as weight-based dosing, checking to see that a patient has had appropriate examinations in the prior year, based on sets of conditions that are showing up in their problem list and that sort of activity. So that's actually work that's been done in a couple of different ways based on the existing meaningful use standards. And given that the CCDA is actually built, in large part, from them, I would expect that the current CCDA standard would also be capable of being used with that and I'm sure that people who have been experimenting with CCDA are also looking at being able to do this with CCDA.

In terms of the external data piece and registries, I'll sort of relate that in the context of some of the kinds of things that I was discussing with the folks who were working on the case reporting activity in terms of the various mapping tables that are available for reportable and notifiable conditions. And being able to use external data to report the reportable and notifiable conditions. I know that there's been some experimentation done by various people in trying to use that data to be able to trigger clinical decision support activities. Some of that's been done with HeD and there are other sorts of interventions that have been tried with simpler mechanisms such as accessing value sets that are based on some of the reportable and notifiable conditions to trigger clinical decision support rules for either case reporting or similar activities.

And those also seem to be fairly workable, although I know the challenges that people were reporting about that, in terms of being able to dynamically access value sets over the Web that was a key challenge. So the value sets needed to be downloaded on a periodic basis and checked and verified before they'd actually be deployed, and that mainly has to do with you really don't want to be downloading stuff every time you want to use it. You simply want to download it once, populate the tables and then be able to more efficiently access that data in – triggers than you have accessible in the products.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Got it. Before we hand it over to Bryn, any other comments Keith?

**Keith Boone – System Architect – GE Healthcare**

Umm, so, in terms of other comments, one of the comments that I have on some of the activities that are going on, there's a lot of development that's going on right now in HL7, in terms of trying to harmonize some of the HeD and HQMF activities. And in terms of the HeD pilots and the HQMF pilots, they're both pretty well along in having done some pilot activities, but we've just gotten through some basic piloting. If we were in a situation where we're going to say, in six months there'd be a recommendation coming out for a particular set of standards, I'd be a little bit cautious about taking up the existing sets of standards right off of the bat because of some work that's in flight right now, trying to harmonize those.

And if what we were looking at was saying well let's use the existing standards work, I think one of the points that I'd make is that that would probably be a good place to start from, in terms of the lawmaking process. But if we were talking about using those existing standards, we might also want to consider the thinking that this would be potentially an optional certification criteria, because of some of the flux that's going on, so not part of the core requirements of EHR, because this is still work that's really very much under development in the HL7 spaces. And the pilots that have been going on have actually been using early cuts, drafts of those interesting standards instead of the work that's been recently published. So we don't have a lot of testing experience with the most recent work, and I think that's really my only feedback on that.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Great. Does anyone have any quick follow up comments before we hand it over to Bryn?

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

This is Aziz Boxwala and I agree with that Keith said. Keith, I would just add to the sort of harmonization comments you made that I think the harmonization activities will probably not result in changes to the functionality of the specifications, as it will relate to more of the sort of syntax and achieving harmonization so that we're working off one set of base specifications. But we'll still have the same capabilities, it'll just look a little different.

**Keith Boone – System Architect – GE Healthcare**

Yes, I'm in complete agreement. The challenge – the reason I bring up the challenge and the idea that maybe it's worthwhile making this an optional set of criteria is because I know that it's very hard to convince people to take and use something that is quite publically still in flight and still evolving. And getting them to commit to work with an early version of it, so the idea is that you can say, well you can make that an optional criteria and maybe have some opportunity to do some updates of standards along the way that's going to enable that to be a little bit more consumable by the industry.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

That seems like –

**Keith Boone – System Architect – GE Healthcare**

To say, this is something that I don't have to do immediately for meaningful use, but it is something that I do want to do because it's clear as an optional criteria – the next time around it's going to become part of the core.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Yeah, this is Rob McClure and I wholeheartedly agree with what Keith is saying in that it concerns me a lot that we might put something in that is required that is moving and therefore give folks an expectation that they can design to something that often times requires modifications in multiple ways. And it's something that's really important and then we're trapped because frequently we get close, but we don't really hit the nail on the head in terms of what we try and accomplish with these early standards. So, I do think that we – we're in a difficult situation where we want people to participate so that we can learn what our eventual solution is, as opposed to just doing it in theory with small pilots even. But, we want people to understand that that participation is optional and it's intended to support a transition to the final solution. So we need people who are willing to participate with the understanding that what they do likely would change, so that it gives a firmer foundation down the road. So I absolutely agree with Keith, we need to encourage use, but we need to make it optional.

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

And this is Floyd. I would agree with everything that's said. I do think, though, the call was set up so we could look at some of the information to help feed our decisions and I feel like we've reached a conclusion without seeing the data yet. So, I'm looking forward to the rest of the call.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Excellent segue Floyd, excellent. So, Aziz and Bryn, we're going to hand it over to you. Bryn, I know that you sent some updated slides –

**Bryn Rhodes – Owner – Database Consulting Group, LLC– Health eDecisions**

Yeah, that's correct.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

– and folks from Altarum, have those slides been loaded yet?

**Caitlin Collins – Project Coordinator, Altarum Institute**

Yes, do you need them right now?

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Please.

**Caitlin Collins – Project Coordinator, Altarum Institute**

All right, let's switch over.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

So, Aziz and Bryn, if you could keep your comments hopefully within around 15 minutes, I know that you have a lot to present, but based on the conversation that we've been having, try to detail your comments to these broad themes around usability of current standards for data capture is critical. And then around feasibility for inclusion of these in certification criteria, specifically on timelines. So what do you anticipate this work taking, being sort of ready for prime time in six months, in 12 months, in 18 months, etcetera.

**Bryn Rhodes – Owner – Database Consulting Group, LLC– Health eDecisions**

Okay, so this is Bryn. I only got those three questions this morning, so the presentation really is kind of just an overview. And so I'm going to try to, as I go, tailor the presentation to those questions, so it's going to be a little disjointed, but here we go. So, next slide please. So, kind of the agenda is to give just a brief overview, talk about the key questions to frame this presentation and then talk about what the key deliverables are of the HeD Initiative. And then go into discussion. So, the next slide please.

So the goal of HeD and the whole point of the Initiative was to define and validate standards that enable CDS sharing at scale. One of the biggest problems that we were trying to solve was that vendors have CDS systems, but they can't share the knowledge, they're coded in different proprietary formats and everybody has a different data model that they're using to express that reasoning. So sharing was really not even – not feasible, and so that was one of the primary goals was to enable that sharing. So with that in mind, next slide please.

So, we've basically identified two main use cases, one, sharing the knowledge artifacts and two, actually providing a standard for accessing and using Web services. So they're really two completely independent standards or use cases, one says how do I talk about what a knowledge artifact is and the other says, how as an EHR or health system do I request an evaluation of clinical decision support and receive a response that's actionable. So the next slide please.

So we looked at – this is just kind of to give an overview of the scope of what we looked at. We tried to incorporate everything that we could find. We had experts from lots of different areas contributing to the analysis that was done in HeD and we looked at basically everything that was out there. What the vendors are doing, what the academic side of things is looking at and we tried to find the best way to achieve those two separate use cases using as much as possible existing work. So, the next slide please.

So the resulting output is basically three main pieces, the HL7 virtual medical record, which has several different facets, the – and that's really the piece that talks about what kind of data we're looking at. Not necessarily how to capture it, but what needs to be captured in order to enable clinical decision support and reasoning about that data. Then the decision support service, which was an existing HL7 standard that we just kind of added a few minor things to and then use case one and two implementation guides. The use case one implementation guide having the knowledge artifact sharing schema and specification and the use case two implementation guide kind of putting all those pieces together and showing how an implementer could provide and implement a service to provide CDS using all these different standards and putting them together.

So I'll say a word about the capturing aspect at this point. So the – one of the things we tried not to do was to get into any kind of area that would prescribe how a workflow progressed through an EHR. So, what we wanted to do was provide ways that the artifacts could indicate what triggers they were interested in, but only in terms of the data involved, not in terms of the workflow. So the schema itself provides a way to say, this artifact cares about this kind of data when it's inserted or when it's updated, but it doesn't provide a way to say, we're interested in this particular stage of the workflow. And so part of the integration effort that someone would deal with is deciding how, in their particular workflow, those triggers from the actual user would map to the triggers that are expressed in terms of how the data is actually being modified within the artifacts involved. So that's a – that's kind of an open question about how that actually occurs, but we think what we've done with HeD is provide a most flexible way for that to happen, to enable every conceivable scenario, or at least every one that we thought of, to allow those triggers to learn decision support, without impacting the decisions that would have to be made in EHRs and changing their workflows unnecessarily. So, next slide please.

So these are the questions, I just kind of restate them here and I talked a little bit about that, so let's go to the next slide. So the first key deliverable is the kind of a foundational CDS information model, the vMR. Next slide please. So the underlying information model – the need, standard CDS data model that's simple and intuitive for a CDS knowledge engineer to understand and use. So what we're trying to do is make it so that the artifacts can be expressed easily against the data involved. So, next slide please.

This might not be the – yeah, next slide please. I'm not sure –

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

There's somebody typing, if you could please mute your line. Thank you.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**  
Bryn, is this the old presentation?

**Bryn Rhodes – Owner – Database Consulting Group, LLC – Health eDecisions**

No, but I'm – I think I must have skipped a – or missed hiding of that slide. So, the challenge here – this is just an example slide that shows the challenge without something like a virtual medical record. Everybody has a different way of representing blood pressure and I think that's non-controversial. So what the vMR is trying to solve is to say, let's provide one way to do that. So next slide please. To – sort of this is the goals of vMR, provide a standard information model that can be used across CDS implementation. And this last part is kind of key, that it's simple and intuitive for a typical CDS knowledge engineer to understand, use and implement. So, next slide please.

Yeah, this – go ahead and skip that slide. Sorry, this was pulled from a – no this is an older version. Sorry. So next slide, let's just go – let's just burn through them. Next slide. Next slide. Next slide. Next slide. Umm, okay, so that was the first key deliverable. The second key deliverable is the knowledge artifact implementation guide; one talks about the separation between the model and the expression logic, so that the two can evolve separately. And two talks about how the knowledge artifact is structured overall. So, next slide please. So the primary goal here of this use case and this artifact implementation guide was to be able to share those interventions so that any organization can acquire them and deploy them and even author. Next slide.

So the use case – is that – it's very simple, knowledge artifact supplier provides a computable artifact to a CDS artifact integrator. Next slide. So, we're not creating a new execution format, the focus of the format is representing the logic in such a way that it can be transferred and it's really just a way to kind of define a lingua franca for how to reason about CDS. Okay, next slide. Um, this is just talking about all the different pieces that went into it. We looked at basically everything that was out there in terms of how to represent. We looked at the vendors for specific formats, we looked at standard formats, as much work as we could find in all these different representations. And next – so what we found was that not everything met the requirement specifically for use case one. And so what we ended up with was kind of a harmonization or a synthesis of all of these ideas, kind of a best of breed approach. Next slide.

So the schema ends up with various components that are then put together. The schema is defined to be as modular as possible so that pieces of this can be put together in different ways. We have different artifact types that we support and the different pieces are then put together in different ways to support the different types. And the trigger component that's identified there has specific relevance to the capturing question, where we're saying, that's where we define what would actually trigger the artifact, so the artifact itself specifies and those triggers can be done on a periodic basis or based on changes to data. So, for example, you can say whenever a new medication comes in, this artifact needs to run or you can say, at midnight, this artifact needs to run. Okay, next slide please.

So currently supported CDS interventions are the event condition-action rules, things like when this happens and this criteria is met, perform this action. The most common example is – you have a 68-year-old that says when the patient's hemoglobin A1c is below a certain threshold or above a certain threshold, they need to perform a particular action. We also can support order sets and structured documentation templates. The goal of the modularity in the HeD schema was to allow other types, we specifically scoped HeD to these three, but other types – it could be expanded to support other types as well. So, next slide please. This one isn't supposed to be here. Next slide please.

Okay, so then the final key deliverable is the decision support service IG, which talks about how we put all these pieces together and implement a standards based clinical decision support service. So next slide please. So this – I mean the goal is to allow any organization to easily obtain that guidance. So any vendor could by implementing against this standard, obtain CDS guidance from any vendor that implements it – from any service vendor that implemented that standard. Next slide. Again, a very simple use case, we have a CDS request containing patient data. It goes to a guidance supplier, through some mechanism deciding what knowledge artifacts to actually run, the evaluation is performed and the guidance is returned. Next slide please.

Actually, can we go back to the previous slide, I have one more thing I want to say about that, sorry. The – we very specifically targeted this piece of the puzzle because we don't think this is totally resolved anywhere yet. And so we're very careful not to prescribe or talk about any kind of workflow, as I was discussing earlier, any kind of workflow within the EHR itself. This is only talking about those service boundaries between EHR and the knowledge supplier. The request comes to the knowledge supplier, there may be contextual information about where somebody is in a particular process, but the clinical decision support in general runs based on the patient's data, not where they are in the process. And the guidance is returned and the EHR then decides what to do based on that guidance, there are no prescriptions about how that information is to be used, it's simply returned and the EHR integrator decides where and how that fits into their workflow.

We think that strikes the right balance between enabling interventions to be given at the right time within the EHR, but without tying the EHR's hands to say, here's where you have to put a particular piece. The user interface side of it is so varied and the user experience, we didn't want to put any kind of shackles on that side of it, so we focused only on that communication between the vendor or between the EHR and the service. Okay, next slide please.

So the key standards with decision support service, the Virtual Medical Record and the CCDR, so we have – CCDR, sorry. Terminology bindings and value sets being adopted within the vMR as vMR templates. So the vMR work that we've done has – the base vMR that just describes what data is possible to represent within the vMR. And then there's templates work that's being done to define, for a particular scenario, what information you actually need to have present and what value sets are used to represent that information. So that when the artifact requests information, it does so not only in terms of the type of data expressed in the vMR, but the template that would be used to represent that data. And so that gives us a way to tie those concepts so that the author knows when they're talking about a concept in their reasoning, the integrator has the right – the consumer of that artifact has those same concepts. So using – basically leveraging the work that is being done in the CCDR and QRDA space in terms of value sets, to provide that conceptual mapping and make sure that that's clear between the author and implementer. Next slide please.

So these are just some samples of a few current implementers of these standards, OpenCDS part of the – and then Enterprise Clinical Rules Service, part of the CDS Consortium and Epic EHR will support guidance services in the 2014 release. So this is just kind of showing some of the existing momentum behind vendor adoption here. There are other large vendors such as Allscripts, that have also participated heavily in the pilots and Zynx for example, has also participated heavily in the pilot. And – so there is momentum in terms of vendors that have proven, with our pilot programs, the effectiveness of the standards and because they participated in the process of development through the S&I Framework Initiative, are supportive of the standard itself. So, next slide please.

And this is just kind of a standards status. They are – they've all passed ballot, we are making changes and republishing. None of them have actually been published yet, in terms of HL7 – specifically – officially published, we have plan – we are planning on publishing the HL7 CDS Knowledge Artifact IG this December, passed ballot in January, they've done some reconciliation and the DSS release 2 and the DSS IG both passed ballot with 100% affirmative. We plan on publishing those as well. And then the vMR logical model had each of these three standards related to the vMR, have undergone extensive ballot reconciliation and they passed ballot in September. We're still going through the – we've completed ballot reconciliation and are planning on publishing as well. I don't have exact timelines on the publishing apologize for that. I can track that down if necessary. So, next slide please.

So to kind of come back to these questions. I think they were addressed along the way, but we can open it up for discussion at this point.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Great. Thank you Bryn. So the first question that we're trying to address is usability of current standards for data capture. Do they have the specificity to define the "where" in systems the information should be coming from and what kinds of information should be gathered? So I'd like to open up to the group for that conversation.

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

Great. This is Floyd with a question. So I do understand and I think you've done a really great job pulling together a lot of the – first of all the use cases and how the expression can occur. I'm concerned about the questions though, what kind of data elements and where in systems. Because the fact that an HeD will – can specifically ask for an element that would be a trigger for another element, it could potentially ask for an observation that isn't captured routinely in clinical systems. And is there any guide – one, is there any guide to feasibility, so that it can be implemented in a way that might actually find data in clinical systems that could be connected? And the second question is, given the rule in HeD, this doesn't connect directly to existing systems and I understand that's what the whole certification process is for and that's where meaningful use is, but – is going. But is there any ex – is there a way to expect that this could work, except in open EHR, in a clinical vendor's system and how would you approach that?

**Bryn Rhodes – Owner – Database Consulting Group, LLC– Health eDecisions**

So, on the first question, the HeD artifacts has a section where it defines what we call external data. And that section basically defines all of the data of interest for that artifact. And those data are defined in terms of the type of data involved, so you can say you want problems or medications, but they also specify the template involved. And so a huge part of the work, I daresay the lion's share of the work that's been done as part of the S&I Framework is pulling those templates together and trying to define exactly what data would need to be exchanged. And the templates involved are kind of – it kind of takes an 80:20 approach where the volu – we recognize that there's no way that we can specify every piece of data that everybody would ever need to use. But what we can do is capture kind of that 80% that says if you have these templates, then you can talk about almost everything that needs to be talked about in the process of clinical decision support. And the second part of that is that the whole aspect of the templates is designed to support ongoing development. So that as we encounter new scenarios within clinical decision support, where the vMR either for structural or for confusion over concepts at the template level, doesn't support a particular application decision support, new templates can be developed to meet that need. So, I think that's the first question.

On the second question –

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

Just to follow, so if there's a template for observation or findings, there is the potential that somebody could be looking for some observation that would encourage hard wiring on the implementation side, to be able to capture that data and that may or may not make it feasible. That's my concern.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Floyd, what's an example of that?

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

I think we've had a lot of examples in the ECQMs where information is requested that just gets implemented as a checkbox somewhere that's not within a workflow, and that's part of the implementation issue, of course. But we wouldn't want to see HeD encouraging more of that, but rather using data that already exists.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Like time of last known well – as an example?

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

That's a good one. A lot of things that are cognitive that are in free text somewhere and yes, there are ways to use parsing and get it out and electronically manage it, but, it's not routinely available that way, so they end up as checkboxes.

**Bryn Rhodes – Owner – Database Consulting Group, LLC – Health eDecisions**

Yes, so we spent a lot of time thinking about those types of problems within the HeD Initiative and there are, I think, two different ways that those are handled within HeD, one is just kind of the general underlying framework for being able to answer the question, what data do you need in order to evaluate this artifact? And in that sense, the data and the HeD schema itself are as general as I think it's possible to be while still enabling full real-time clinical decision support. And the way that we do that is by only allowing within the external data section that I talked about, we only allow specific restrictions to be specified there. So you can only specify that a particular value set is in use, a set of code or a particular data range given and anything else beyond that, you can't specify as part of the data requirements for the document.

And what that gives you is a way to one, ensure that you can answer the question, what data does this artifact mean in a computable way and two, it gives you a way to kind of be very general about how that works. So rather than – in your integration, rather than okay, I'm looking at this artifact and so I need to pick up this specific piece of information, what you do is provide kind of a generic integration that says, in terms of the types, these are how they map to my structures. And then it doesn't matter what artifacts are being actually evaluated, the requirements for those artifacts are communicated by the service standard and with your general implementation, you just pick up whatever data matches the requirements that are needed by the artifacts that you're running. And so it kind of decouples the question of what artifact is being run versus what data is being picked up.

And then the second layer of getting information and making sure that the artifact is talking about the same thing that the integration is talking about is the template, and those are layered on top of that underlying framework. And those templates, they have that potential because we're, as an integrator, the fact say, well I need to pick this particular template, then there's the temptation to say, okay, go out and code a specific capture for that template. And that's certainly a possibility for implementation, but I think because of the underlying framework that allows you to do that in a general way, I think we have the capability to provide both and decouple that. So, does that kind of answer the question?

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

That was the first question, yeah.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

And Floyd, what was the second question?

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

The other was basically, today it requires a manual effort to read a nicely compiled HeD rule, but to actually go from that to presenting something to a clinician and providing the option of document X or order X, and I don't mean it has to be an alert, just providing the option, that doesn't happen today. And what would it take and how feasible is that in what timeframe?

**Bryn Rhodes – Owner – Database Consulting Group, LLC**

So – sorry, go ahead.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

This is Aziz. So, with the HeD artifacts, the intent of that it should be – it'll be deployed within an existing system, so it'll get translated and presented within an existing system rather than sort of developing new functionality. The only new functionality needed is the ability to import the HeD artifact into the whole system, so either as a rule or an order set documentation template. And we present it with the capabilities that system has, so, if you have the ability to present options, you will be able to do that in a nice way. So HeD doesn't prescribe how the information gets delivered to the clinician, it's sort of specifying the logic, the thing here is for patients with – who have heart disease and are not on beta blockers, here's the recommendation. Now how that gets integrated into the workflow and how it gets presented is going to be left as an integration task, where we're trying to simplify sort of the process of providing the logic and making that part sort of the translation of knowledge easier.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Aziz and Bryn, this is Danny Rosenthal. On your, I guess it was slide 31, with the sample of current implementers, these two issues that Floyd was talking about, what were the implementers experience with both of those, how did people sort of resolve that? Was the abstraction barrier fairly clear as far as where the HeD was defining the data elements and logic and then was it clear where the EMR took over to actually handle the data capture.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

Sort of, I think there's two separate pilots we – I mean, it's two separate use cases, right.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Um hmm.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

So in both of those cases, the answers a little bit different, in the first use case, I think for the most part, I mean the translation occurred and what we've found was that a large part of the sort of data specifications could be translated. There were some ambiguities I think we identified, one was in the order set translation process where we had to map from an – that was specified in HeD into an order item within the host systems catalog, and that wasn't 100% clear, even with the bindings that we had. But this was before the work we had done with templates, so I think the templates work will help resolve some of that. And the se – and I think there were other cases where some of the data wasn't being captured, I think those were mostly exceptions. We were doing a rule for – similar to what Keith alluded to earlier, reportable conditions and some of the data that's needed for public health reporting like I think the addr – location of the clinic down to the county level or zip code level wasn't there in the systems and so that was something we had to work through.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Got it. Then these – one of the issues that I heard folks ran into with HQMF in Stage 1 is the exercise for the vendor, and Jason, maybe you can comment on this, was that's great that you have things in a CDA template that matches an active problem. That's great, but we're just going to look at this and we're going to manually code it into our system for the clinical quality measures.

**M**

Um hmm.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

For the HeD, do you see that same situation happening? Even though the templates are, as you showed on some other slides, are even more simple than the templates that we have for HQMF, do you think that vendors are going to build direct translations and direct – and build these directly into the systems. Or do you think it's just going to be a similar exercise of thank you for sharing these rules using a Web service, now we're going to grab the rules and do what we normally do with our rules and we build them into our own engine?

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

Right. So, I'll comment and then I'll ask Bryn to comment, too. I think –

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Yeah.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

– I mean, we separate the process into two things, one is translation of the syntax into – from the HeD syntax into the native syntax of the CDS role of the EHR system. And the second is translating the semantics side. I think in terms of the syntax and translating the logic, HeD can, because it's parsed out really well, can be achieved, in fact, has been achieved in several pilots. So I think that part, it does, and I'll probably say, it does better than HQMF in that respect.

In terms of the semantics, translating the semantics like hey, when I'm talking about patient with high risk for heart disease, this is exactly what I mean, it comes down to terminology bindings and those kinds of things and I think HQMF and HeD are sort of in a similar place in that respect. I think that always tends to be a challenge. But we – Bryn, you can comment on the experience we had with translating the rules for – into the Allscripts system when we did the pilot. We also did translate some documentation templates into the VA's VistA system, I think there was very little semantics to be translated there, so that went really smoothly. But Bryn, you can comment on the Allscripts pilot.

**Bryn Rhodes – Owner – Database Consulting Group, LLC**

Yeah, in the case of the Allscripts pilot, it was kind of ideal for piloting use case one because they have an existing real-time clinical decision support system with a native rule format. So, the exercise was translate HeD's format into the Allscripts format. And there were some places where the semantics didn't map across perfectly, for example, their model – their data model had a status in the – similar to the way a CDA does, where the vMR model did not. And so – and the vMR represents status with different classes, you have an in-progress procedure versus a proposed procedure, where that's represented with status in the – site. And so there were elements of that where we had to manage that within the translation, but we were able to do that.

And then at the semantic level, because they were already actually using the NQF value sets, same as the vendor that developed the artifact – so the semantics there were exactly the same, they were already using the value sets. It was actually a good demonstration of the value in having those and in using those and so I think the concepts worked very well in that respect. There were some other issues specifically around how the action was translated, the HeD format had more functionality than the target system did, but we just ended up basically truncating that functionality and bidding what the target system could support, so that the translation basically worked and fit within what they already had.

So the rule said, show an alert if the patient has an A1c over a certain level, and they already had a rule that did that, they already had their systems in place to be able to account for that. So that pilot just involved translating that rule and importing it into their system and running it and making sure that it behaved the same way. And apart from the few hiccups that I've described, it did, so –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

The short answer to your questions was that, I think for most rules, it will be – I think the translation can be automated to an extent and then the human has to take over and verify and clean up. And it'll vary how much automation can be achieved, based on the rule, based on the capabilities of the system it's being imported into and how that systems been designed and catalogs have been designed and so on.

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

This is Floyd, just a question for scalability, one, what – did Allscripts see that it worked in their ambulatory and inpatient systems or just one, which already might have had some of the infrastructure? And two, second question, what percent of the effort might have been able to be automated and what percent remained manual?

**Bryn Rhodes – Owner – Database Consulting Group, LLC**

So in the first –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

So I think we did only translation to Allscripts Enterprise, not to –

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

Yes.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

– and Bryn can probably tell you the percentages, he was at that one.

**Bryn Rhodes – Owner – Database Consulting Group, LLC**

So, in terms of translation of that particular artifact, it was 90%, I think we probably get close to 80% in – just in general, at least against a system like Allscripts that has a rule format and an engine and is already layered out in an architecture that way. In terms of translation into a system where rules are simple hard-coded into the EHR. I mean, there's no potential for translation there, obviously. This is targeted towards some type of architecture that supports the notion of a rule and a rule engine that's capable of evaluating on – in a generic way. The – I'm sorry, I forgot the first question.

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

No, I think you – Aziz answered that one.

**Bryn Rhodes – Owner – Database Consulting Group, LLC – Health eDecisions**

Okay.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

This is Rob, it's been a great discussion. Actually, would be interested in getting these guys to give us a little feedback on the specific questions that we've – the workgroup has actually been asked to comment on. So Danny, I don't know how you want to do that, but there's the particular I guess you'd say question, it's the – well particularly the updated Stage 3 objective around clinical decision support names a few things, for example it has an expectation that work would be done in four of six NQF domains, and names those. And then has specifically called out some functionality and I'd be interested in their thoughts as to whether HeD has directly addressed all of these or there are areas – my sense is, having participated, that there are some of these items listed here for which HeD is not really providing us guidance.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Sure Rob, so can you please –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

– that slide up again please? It might be helpful.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Yeah, this is the –

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

We have it up.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Yeah, this is the Meaningful Use Workgroup Stage 3 clinical quality word document and it should be that very first page there.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

So as perhaps somebody's bringing that up or whatever, I can kind of go over this. So there's – the proposed objective is going to focus on four of six domains, those – there's actually – four of the six, there's actually more than six "bullets" there, so I'm not sure how they're separating out domains. But, preventive care, chronic disease management, appropriateness of lab and radiology orders, advanced medication related decision support like renal drug dosing, improved accuracy/completeness of problem list, drug-drug and drug allergy and CDS applied to capture shared decision making.

My experience, I mean if I was to be asked that question, I would say HeD certainly supports most of those. The two that I wonder about, and I'd like some comments on are improving the accuracy and completeness of the problem list, that's pretty generic and so it's possible. And then the last one, CDS applied to capture shared decision-making. And I think what – again, I'm looking at details and this will be more evident with the second section of that question that we were asked to review – or the objective, I mean. And that is, do we have in Health eDecisions artifacts that exist, as opposed to what someone might propose for the future that would support doing this, like shared decision making?

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Altatum, can you please pull up the word document?

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Yeah. Again, this – I don't want to preclude conversation on that but then there are also some very specific functionality that's being discussed or called out in that objective and some of those I also wonder whether we'd directly address. For example, it specifically calls out the use of structured SIG standards –

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

There you go.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

– and I don't know that we've dealt with that in HeD. And so, I just wonder whether there are some of these – as important as they are, whether that means we have the guidance to do this yet or what.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

So Rob, I can probably answer. Shared decision making probably is very weakly supported right now. The artifact for – in HeD is designed for ECA rules specifically, event condition action rules and I don't think that's really conducive to shared decision making.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Right.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

So that's weakly supported. Now having said that, I think one of the sort of design principles behind HeD was to use a composition based design, so that's the reason why we can support order sets and documentation templates and ECA rules within the same sort of family of standard. And it would be something possible that we could enhance Health eDecisions to support shared decision-making using the same building blocks that we have in HeD.

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

This is Floyd –

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Understood. This is more an issue of whether we have good evidence that we should include these as Stage 3 objectives because there's –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

And I think more importantly, whether – I mean, we can define the specification, the sort of logic specification within HeD, I worry about how the host systems will deal with those. I mean, do they have the capabilities to support shared decision-making, I think.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Right.

**Floyd Eisenberg, MD, MPH, FACP – Independent Consultant**

This is Floyd. I would just add to that, Aziz, I thought there was a way to handle provenance so you'd know where the information came from to handle in the rule, but as you say, the issue is how does the host system handle it?

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

Yeah, that's part of it, when just handling the logic part of it, but there's a lot of interaction that has to happen within shared decision making between the healthcare professional and the patient or consumer. And maybe others involved in it, so there's kind of a lot of workflow issues, there are a lot of other issues going on here that I think kind of go beyond the scope of HeD to some extent, certainly goes beyond the capabilities it has today. Some of those capabilities can be easily enhanced, some of those might be outside of the scope of HeD.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

So, I'll take that as a no. I believe it's a no –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

Yeah.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

– how about improved accuracy/completeness of the problem list, again for that one, and if you scrolled up on that –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

I think that actually we can do well. There are probably some things that might need to be worked on, but I think overall I think we can probably deal with that.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Right. Okay. Good. Others may want to add in on their comments on this first section of this question because my takeaway from this and as I've kind of alluded to, I've been actively involved in the Health eDecisions work. So I'm agreeing with Aziz in that I believe of the things that are listed here, Health eDecisions does provide guidance and in fact, in general we have some evidence of success in doing all of the items on this list, except for that last one, I have strong reservations about that last one.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Yup. This is –

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

And then I do want to talk about the items that are in that second list.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

The certification criteria. This is Danny, Rob, I agree with you on that first section.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Okay.

**Bryn Rhodes – Owner – Database Consulting Group, LLC**

This is Bryn. The only comment that I would add on that first section is, appropriateness of lab and radiology orders, I think that may involve some fairly detailed representations of lab and radiology orders and my only concern there would be whether the vMR covers those representation, so –

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

That's true, we don't cover that in detail yet. That's another good point.

**Bryn Rhodes – Owner – Database Consulting Group, LLC**

So that's the only one –

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

That is a big item of interest in – at CMS, so I think it actually is important for us on this workgroup to consider whether we've got good evidence of success there, and that doesn't mean HeD is the only indicator of success, but I agree –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

I mean, I don't know, I think the appropriateness orders typically, I think HeD would be able to support, I think vMR has reasonable level of detail, maybe some of the terminology bindings need to be reviewed, but –

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

What that boils down to is that the templates aren't complete yet, Aziz –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

Yes.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

– but I – that's why I say, I think I would agree that the capability is there –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

Yeah.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

– whether it's really been tested out is a different story.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Folks, we have seven minutes before we open up to public comment, so I'd like to spend the next seven minutes talking about the appropriateness of the proposed certification criteria at the bottom of that page.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

So – just to open that, I think that – these are very specific kinds of areas and again, if Bryn and Aziz could give us their thoughts on whether any one of these items is really not in scope of HeDecision – HeD that would be great.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

Yes, I'd say structured SIG standards, because vMR probably doesn't have some of those details yet. Even with shared decision-making, I mean certainly we can flag the – sensitive conditions and provide decision support material for patients that kind of simple level of decision support can be provided with HeD.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Right. Those were the two that – those two in particular, but also number two, the idea of identifying preference-sensitive condition and providing decision support, I mean, that second “and,” and provide decision support materials for patients, I'm totally lost as to how those pieces actually are supposed to create one criteria. I worry about the first one, we're – we haven't yet, in my opinion, in the standards world confidently managed the issue of identifying and then acting on preference-sensitive issues. Really, if you left that part out and just said provide decision support materials to patients, I think that's a meaningful use –

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

So we could – use case, but I'm thinking like something like let's say preference-sensitive condition to a patient with advanced arthritis and needs to decide between let's say surgical and medical treat – continuing medical treatment options.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Ah, got it, totally misunderstood that.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

And so that – we can certainly, I think identify it as long as the criteria were relatively precise. I would say providing decision support materials at this point sounds to me like something like providing direct material, either printouts for patients or if we were running on patient portal, then that patient would be directly be provided links to the materials.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Like treatment of prostatic cancer alternatives, I got it, preference-sensitive treatment.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

Yes, patient preference-sensitive.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

This is Danny. Need a specific standard support each of these functional capabilities in order to include it as part of the certification?

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Right. Yeah, that's a good point Danny and there – I don't think there is a “standard” for the first one, which is the track CDS triggers, I mean, there's all kinds of CDS triggers. To specifically identify a way of representing preference-sensitive treatment options, which is the way I would have worded that, that I don't believe exists. These are all things that would take more generic things in place and then apply them in that particular approach. That's not true of structured SIG, which unfortunately we didn't include in Health eDecisions, so it's one place where we don't get guidance.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

So for an EMR vendor, Rob, this is Danny. If there was the certification criteria that your EMR shall be able to track when a decision support rule fires –

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Right.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

– is – if there is no standard for that, does that necessarily mean that that certification criteria would be inappropriate or is the gut check that first one over there is fairly reasonable in that most EMR vendors should be able to meet that functional requirement.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

That's – I think this is a really important question to ask ourselves. This idea of, how do we align our desire to see something move forward when we don't have a definitive thing to tie it to; therefore we open ourselves up to kind of creating multiple ways, and then how do we collect that and bring it back down together? I really worry now, having done this for a while, with that second approach where we say, we really want to see this happen, but we don't have a single thing that we can tell people to do. Therefore they're going to do fifty different ways of doing it and then once they've done that, how can we get them to change everything? So I really – I don't know how we answer that question other than through optionality as opposed to requirements and some kind of expectation that we rapidly coalesce. As important – I mean that's clearly something we should have been able to say, it should be in a standard, but it's not, that I know of.

**Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

I wonder if we could rephrase this criteria, I mean, the first one, track CDS triggers to be more specific, to say something like, the system should be able to – capable of triggering rules when new lab results are available or when the patient is admitted. Or based on specific criteria, which might make it easier to implement then, and make it more specific.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Yeah, I think for this workgroup, I mean, perhaps we can say that we don't need a standard in that particular place, that there's – because it's really outcome as opposed to that we're going to track a particular concept has been captured in a particular place. And I think that's what this group has to sit down and decide – that's a good example, I think, where we would be okay, let's say, okay we don't – there is no standard for this. There isn't a specific slot name and a specific set of values expected to be captured, it's not going to be exchanged, but the outcome of this is what's critical. We don't care how you do it, because we don't care, it's just that you can do it. And I don't know that that's true for all of these, but it certainly could be true for the first one.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

So, it's just about time to open up for public comment, but I want to get the group's feedback. I think that we've made a lot of excellent progress on this topic and thank you very much to Aziz and Bryn for reviewing this with us and providing your feedback. I'd like to start our next call, and Marjorie, let me know if this makes sense, starting off where we're leaving off today, which is looking at the certification criteria and giving our group feedback on – for each one of these seven, number one is it reasonable, sort of gut check. And then number two, is there a specific standard to support this? And then number three, if not, should it still be a certification criteria? What does the group think about starting our next call with these topics in mind?

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

I'm in support.

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

This is Marjorie and I agree. My question would be to Michelle and to Julia, particularly Michelle if continuing this on our next call matches the timeline of the Meaningful Use Workgroup.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

No. That was going to be my next comment, thank you Marjorie. So they were hoping to have feedback sooner. So, I'm not sure if it would be possible to schedule another call for some time next week, but they were – just based upon where you were able to get through today, I don't think even with the next call that you have scheduled you would get through everything that they were hoping to have. And they need their information – they were hoping to have it by the 10<sup>th</sup>, which is next week.

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

Yeah, and so I just, and then Danny you might want to jump in, but I think we've had an extremely rich and important discussion in order to be able to give that workgroup substantive feedback. And I would ask that maybe we could, with this help, we could manage what the expectations would be in the way of feedback to them by the 10<sup>th</sup>.

**Julia Skapik, MD, MPH – Office of the National Coordinator**

Michelle, this is Julia Skapik, I could suggest that maybe we pick the pieces that Michelle thinks the group finds to be most important. And for the rest of it we might consider providing feedback in a way we have before when we have too much material to cover, which is that we get a very clear ask and some background information and then have individual workgroup members submit that and we collate it for the pieces that we can't cover next week.

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

For the workgroup itself, I think it's hard to prioritize, I think it's all important. They're just under a short timeline because they're looking to bring final recommendations to the Committee by January. So I think, per Julia's suggestion, I think it would be a good idea that we may need to reach out to individuals. So maybe Julia we can talk offline and figure out what the best steps forward are with Marjorie and Danny.

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

Well, isn't it – I mean those are all good suggestions, but we were asked something with less than a couple of – in only a couple of days turnaround. If they want our thoughtful feedback, they're going to have to wait for it. If they don't, then we can provide feedback that are – on what things we are –

**Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

I'm sorry, who's speaking?

**Robert McClure, MD – Owner/President – MD Partners, Inc.**

This is Rob McClure. But I understand that they have a deadline, too, but we can't create time. So I think that this is worthwhile, but they can choose to say that it's not worthwhile and therefore we can give them what we can. But I do think that it's beneficial to have this kind of a conversation and if we – we should report back on the things that we've talked about and not report back on the other stuff.

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

Yeah, I would agree that we can report back according to their timeline on what we've discussed so far. I would – and we can talk offline about reaching out to individuals, I'm not so sure that that's the best approach, but circling back to the next agenda discussion. I agree, Danny that we need to pick up where we left off. So, let's do that.

**Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Okay.

**Marjorie Rallins, DPM – Director, Measures Specifications, Standards and Informatics – American Medical Association**

And we're out of time, so it's time for public comment.

## **Public Comment**

### **Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Operator, can you please open the lines?

### **Ashley Griffin – Management Assistant – Altarum Institute**

If you are on the phone and would like to make a public comment, please press \*1 at this time. If you are listening via your computer speakers, you may dial 1-877-705-2976 and press \*1 to be placed in the comment queue. We have no public comments at this time.

### **Danny Rosenthal, MD, MSc, MPH – Director of Healthcare Intelligence – INOVA Health System**

Thanks again Aziz and Bryn for presenting to us and thank you everyone for joining the phone call. Everyone have a nice afternoon.

### **Aziz Boxwala, MD, PhD, FACMI – Health eDecisions**

Thank you.

### **Michelle Consolazio – Federal Advisory Committee Act Program Lead – Office of the National Coordinator**

Thank you Danny.