

**HIT Standards Committee  
Standards Task Force  
Transcript  
March 24, 2014**

**Presentation**

**Operator**

All lines are bridged with the public.

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

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

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Here.

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

Hi John. Anne LeMaistre? Arien Malec? Cris Ross? Liz Johnson?

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

I'm here.

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

Hi Liz. Floyd Eisenberg?

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

I'm here.

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

Hi Floyd. Kim Nolen? I know Kim is traveling in the airport so she might be on mute.

**Kim Nolen, PharmD – Medical Outcomes Specialist – Pfizer, Inc.**

Thanks Michelle I'm here.

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

Leslie Kelly – hi Kim. Leslie Kelly Hall?

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Here.

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

Hi Leslie. Lisa Gallagher?

**Lisa Gallagher, BSEE, CISM, CPHIMS – Senior Director of Privacy & Security – Healthcare Information & Management Systems Society**

Here.

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

And with that I'll turn it back to you John.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Well, great, so folks we have seven items to cover today and as before I'll present the items, suggest a strawman based on what seemed to be a majority of votes and sentiment and then raise what I think might be open issues if there is diversity in voting and then of course ask for all of your comments as we try to get consensus recommendations on these final seven.

So, as before I want to thank Michelle for putting together and collating all of our thoughts and comments because that's been extremely helpful, so thanks.

So, let us, Michelle, I think if we jump forward to what is slide 4 is the summary of care at transitions is our first item to discuss and before I go through this one of the things that I would love Michelle your input on is as I read through your slide in effect it looks very similar to existent Meaningful Use Stage 2 transition of care requirements and so as we go through it I see there is a little bit diversity in the effort, did you have a sense of what is novel about this in Stage 3 as opposed to what we already have in Stage 2?

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

So, the only change is so on the right-hand side where it says summary of care may (at the discretion of the provider organization) include as relevant a narrative, and so that will be required of all types of transitions which are detailed over on the left side.

And then those additional items are, you know, at the discretion of the provider, so those are the new editions, but otherwise, as you said, it isn't all that different than what's in Stage 2.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Got it, okay, so to review this one with everybody, so it's improving care coordination, summary of care that EPs, EAs and critical access hospitals provide a summary of care for each transition which could be a one site of care to another, a consult referral request or a consult result note and as Michelle has just clarified for us typical C-CDAs in Meaningful Use Stage 1 or 2 were structured using data elements or templates that were really at the discretion of the implementer.

What seems novel about this is that now it will require a narrative synopsis which includes expectations, results of a consult, etcetera and that maybe unstructured data, free text is fine or there may be some structure to it and as you look at some of these others patient goals, problem specific goals, interventions, information about known care team members, all free text or structured at your discretion, but must include synopsis expectations or results of a consult for each of the kinds of transitions of care.

So, knowing that the standard here will be C-CDA what we see is that on the voting standards maturity was 4 mediums, 3 lows and development effort 4 highs, 2 mediums and 1 low, and I think now I understand why it is considered a high development task because there is going to be the nature of capturing narrative and my experience from a workflow perspective is that this narrative, which we would think of a discharge summary or something, actually may not be available in time for what I presume Michelle is – does this have some sort of time limit like 4 business days or something associated with producing it?

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

You know that's a good question, we just kept it consistent with what was in Stage 2, but I'm not sure what the timeline was I'd have to go back and check on that one.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Because certainly the type of narrative that we produce in standard workflows is often not available in that tight timeframe so it might require what I would call a summary that is created as part of a discharge planning process which might be separable from a standard discharge summary we create today which can sometimes be delayed a week or two before that's signed, formalized and ready for transfer.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

John, this is Leslie, I think that – and Michelle correct me if I'm wrong, but I think what we talked about is a certain time period after it's available. So, it was allowing for that fact.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

I know that the patient view part of it has to be there within 24 hours of discharge according to Stage 3 which is 12 hours earlier than Stage 2. Now, I don't know if that necessarily ties to summary of care but it is certainly part of what we have available for the patients to view.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And so with this one I think Liz, as you point out, there are some interesting workflow implications.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Oh yeah.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

That are probably worth clarifying Michelle to the extent that you capture whatever discussion happened at the Policy Committee with the notion that if, as Leslie said, it is simply a certain number of days available after a piece of documentation becomes available that is a very different workflow than between the discharge or transition event and this being available is 24 or 48 hours or some such thing.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

You know that we probably should feedback standards maturity development effort and comment on workflow impact once we clarify that.

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

Yeah, so the discussion that Leslie was referring to was around VDT it wasn't around this one. And I was looking back at Stage 2 and there isn't, you know, the time constraint as there are for some others. So, I think the feedback we do need to give is, what is the time constraint, if there is any.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah and when you do that Michelle ask them, because I went back and reviewed all of Paul's input into the Policy Committee this month I suppose, yeah, and there is the 24 hour notation related to patient viewing. So, somehow I think John's right we need to make sure we've tied the right requirement to the right measure.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, if we approach that discussion in the following way, from a standards maturity stand-point we have been told in this slide that structured and unstructured are both acceptable and certainly the C-CDA is capable as a standard today of incorporating unstructured text data in a template so that standard exists it may not have been used extensively to produce these types of transitions of care unstructured text blobs in production but it certainly is capable.

And then the question of course, and this is maybe for Leslie Kelly Hall, you know, if there was a desire for enumerating care team members in some sort of structured way, well I think the language to date has always been that that's sort of a text blob as opposed to structured data because there isn't precisely yet a C-CDA form for structured care team member description.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Only what we submitted in our recommendation –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

For the HL7 care team roster that's been balloted –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

As part of the Consolidated CDA. So, we have done that with that in mind –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yes.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

With the hope that this would probably be ready for pilot phase if we went – if we thought just of the care team, but the Consolidated CDA because it's part of that might have a different answer on maturity.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right and so what it looks like is that the predominance of votes suggest that this is a medium standards maturity and I think it's for the reasons that although, yes the text blob is available hasn't necessarily been widely used and that the care team roster is probably, you know, it's balloted, but not yet widely in production by anybody.

So, I guess the question for the group is does a medium standards maturity on this one sound reasonable? Well, no objections being heard –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

I think we're there, agree, yeah, I agree with you if that's what you're looking for.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Okay.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yes.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Now development effort that takes into account these other issues we've been describing which is that if, as Leslie Kelly Hall said, oh well make it available when the discharge summary itself is available and include that as a text blob, you know, then that is a degree of development that maybe leverages existent documentation processes or medium.

If on the other hand what this is this is requiring the creation of a transitions worksheet that a clinician needs to fill out that is different from the discharge summary workflow then that's probably high. It's sort of fascinating that both of our vendors here said, high.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And I think maybe it's because they read it as, you know, this is actually going to require a new transition of care function. Beth Israel Deaconess for example has a separate function for transitions of care where the care team fills out a patient friendly transition of care narrative that's separate from the other documentation processes.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

And so, John, at Beth Israel is that a – you say care team, is that a physician or is that a multidisciplinary team or how does that work?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

It is multidisciplinary.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Okay.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And so there is a section for the doctor, there is a section for the nurses, might be a social workers or case managers.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Sure.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So they all contribute various sections and then that is inserted into the document that is given to the patient at discharge.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Okay.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

But we built it, I mean, it's a somewhat novel –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Functionality.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yes, yes it is.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

So, what you're suggesting is where there, where it is possible to use existing workflow and existing discharge mechanisms that would then output to this document structure who are probably at low development efforts and standards exist. But if we are looking at a completely change of workflow its high all the way across the board.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

High development no maturity standards and redirect workflow. And I know in the Meaningful Use Committee discussions we never really hit upon a demand for changing entire workflow as much as informing people at transitions that was the main point. So, it will be interesting to see what the notes tell us.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right and so I think maybe the way I would summarize this one would be on the development side if it is simply the incorporation into a C-CDA of existent data elements from existent workflow medium. If it is requiring novel workflow or novel data elements high.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right and I would think – I think I hear high, but, I mean, novel elements but we can get that clarification.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right. So, strawman on this is that there are elements of standards maturity that are high but elements of standards maturity that are low so in effect we said medium. And on the development effort if we state for the Policy Committee that if it is allowing us to leverage existent workflow and existent documents that would have been admitted as part of standard care processes then it is medium. If it is novel, screen capture of data elements because of timeliness requirements than it is high. That sounds like a fair summary.

Well, hey, Michelle, either we have a very compliant group today or they're just preparing for stormageddon I know that's probably going to hit you guys tomorrow right?

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

So John, this is Floyd just with a comment. I think there are organizations that have done similar things to what you have I just don't know that it's common.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

So, I would agree with everything you said.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Good. Well, Michelle, I think we have that one. So, our next one is moving onto notifications and so notifications, this is a new requirement and eligible hospitals, critical access hospitals send electronic notifications of significant healthcare events within 4 hours to known members of the patient's care team like the primary care provider, referring provider, care coordinator, etcetera with the patient consent and events would include arrival at emergency department, admission to a hospital, discharge from an ED or hospital, death.

Okay, so, you know, Liz from an Implementation Workgroup perspective this one would have fascinating workflow implications.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah, yeah in fact I was putting together for my own group sort of a what we think might come out of Stage 3 and this is one that got my attention because the concept is right, but figuring out who to notify and how to notify and it is – yes, I'm looking forward to discussing it in the Implementation Workgroup.

It is again, I'm just trying to think through today where we would get the names of primary provider, referring provider, care coordinator and so on.

And then would this, and I assume it would, but I was going to throw this out to the group, would we be thinking this would need to then – what is the notification modality, meaning is this a thing you call, you send to a Direct mailbox, you – you know, Leslie can you give us an insight into that discussion during the Meaningful Use Workgroup?

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Well –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

I understand the principle.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Yeah, the principle is that the – well, you understand the principle not just from a care point-of-view from a business point-of-view those that are entering into an ACO relationship want to be notified. And so the question is how do we get those names?

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

And do we have to have all those names in order to make it effective or could we use a few names and build to the market and/or let the market build it. And so, I can't even remember if this happened in the Meaningful Use conversation or outside of it, but we talked about today's normal process at a hospital registration for purposes of transcription carbon copies we get the name of the primary care doctor, we get the name of the, obviously if it's a surgeon, we have any other – ask the patient are there any other physicians you would like copies of the records to, that's what we have today and pretty much normal process.

So, if we could build upon the kinds of processes we already have to meet this objective it would be a small step to getting this done. Whereas, if we over complicate it and say there are – because there really is no way to garner those names outside of that process for the patient today, maybe emphasize on the simple part of how this could be done, because there is huge benefit to do these kinds of notifications.

And one of the discussions that did happen, and again I can't remember where it was, it was relative to as simple as in the workflow as a Direct address that would take the place of a fax that we're sending today to the physicians we know about or the care team members we do know about that we get at registration.

So, I agree that if we went whole hog and said we've got to know everybody including the acupuncturist we aren't going to get there, but what could we do to start.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, here's my guess as to how the standards might work to the point that you both have made. HL7 2.5.1 has standard events A01 admit patient, A02 transfer, A03 discharge, you know, there's a whole variety, A06 transfer outpatient to inpatient, A07 inpatient to outpatient. So, the HL7 2.5.1 event notifications exist and in fact part of Meaningful Use Stage 2 certification requires demonstration of some of these kinds of transactions. What's totally novel is that today those transactions typically flow between internal systems –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Or over point-to-point very prescribed fixed types of arrangements not an arbitrary Direct address to arbitrary care team members.

And so what you could say from a standards maturity stand-point on this is that the HL7 actual events are highly mature but the capture of the Direct addresses of care team members and their use in some kind of workflow that results in arbitrary, you know, end-points for the delivery of these messages, the maturity of that is very low. And that's why I think what you see under standards maturity is medium 2, low 5.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Because it's that whole transmission and enumeration of the care team Direct addresses that's the problem.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Correct.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Right, I mean, if you really wanted to take it to simple and say an electronic fax sent from the EHR notification that's highly mature, you know, 50 years mature with some sort of automatic process that allows the system to send those notifications.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah, I think –

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

But that's not where we want to end up.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right, I think, that you're right from an availability of transmission modality. I think where we struggle, and again the Implementation Workgroup will have to comment appropriately, is well there's at least two things that come immediately to mind, one is how many people come into our organizations today without a primary care provider period and then our physicians response to getting assigned someone via the call list and all the responsibilities that follow thereafter and blah, blah, blah. I mean, those are sort of the practicalities of this.

And then I think from the Direct perspective is the, what is being finally worked on now is a national provider directory so that we know where to send it. I don't think the fax is the issue. I, you know, from a workflow perspective, John, the Implementation Workgroup will have to come back to you and say, you know, within 4 hours to whom.

And the other thing that bothered me was to known members; any time that that's – I think the qualification of what is a known member again away from standards maturity and development effort.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Not necessarily today's agenda but there are some real practicality – again, nobody is objecting to this kind of need to create a better mechanism for truly creating a continuum of care with external partners, it's the practicalities of it.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right, so when we say –

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

And defining the – I'm sorry John, and defining known members, if that's simply known as expressed by the patient –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

At registration that's doable, at least it's a beginning.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, if I missed one, you know, maybe strawman would be standards maturity high on the actual notification events.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Low on the actual mechanism of using a Direct protocol in a workflow that is capturing the necessary end-points to communicate with. And then on the development effort what we see are three highs, one medium and three lows and I have a feeling this one has this bimodal distribution because those who ranked it low were just thinking about the existent HL7 messages we're already producing anyway –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

As opposed to the complexity of all this delivery stuff.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Agree.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And so on the development efforts, you know, maybe say this one is high if you consider the notion of capturing Direct addresses at registration whether it's one or many and then getting the actual delivery of the message to that Direct address.

Direct is very commonly used for things like transition of care today. I actually have not seen Direct being used for HL7 2.5.1 messages. I mean, even our friends in public health seem to have often created their own transport mechanisms for those kinds of messages and although Massachusetts has standardized on the use of Direct for public health, as Floyd would say, you know, I think that's a one-off, it's unusual.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

I think Rhode Island is John.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yes.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

I think Laura's group is using that.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

You're probably correct, yeah, that's right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Yes.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

So, let me talk about, you know, the behind the – below the Mason-Dixon line, I guess we're behind the curve here. When we went – when you talk about the proliferation of Direct addresses I think I've shared with the two of you that we are in the process of providing to hundreds of people Direct mail addresses because they don't have them.

Now, I guess the good news is when we're done they'll be more of them, right? So, I'm wondering if the Northeast is experiencing something different than, you know, Midwest, South what do you think about that?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yeah, so patients with Direct addresses are zero.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right, well, what we found was zero nursing homes, home health, rehab, skilled nursing, assisted living.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

You know it's funny I was in a critical access hospital in Colorado last month and talking to the group in this wide region, teeny little hospital –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

And they have it?

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

And I said “what are you doing?” He said “well, we're starting to negotiate with a HISP because we think Direct will be the solution to all of these costly interfaces we can't afford.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Interesting.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

And so they were looking it at as a way to have connectivity for the first time and aggressively trying to figure it out.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Well, what I'm –

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

I think it's a quandary because we've already named this Direct as passed the pilot phase. We are going forward with it in regulation and have already.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

So, it's kind of hard to then go back and say, boy, we're not –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

No, I'm not –

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

We're hopeful.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

We're hopeful, right?

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

I am thinking that, like I said, with us, with those of us who are working diligently to meet the, you know, understandable requirement to external partners I'm hoping in 3 years it will be a non-issue, but just putting it out there.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

I know, absolutely, so I just want to summarize the discussion that standards maturity is both high and low but, oh, given as a gating factor is the actual recording of the end-points to transmit to and then packaging of the HL7 and sending it and delivering it to those end-points the maturity would be low and the development effort, because that's a completely novel set of workflows, would be high.

And no question it's a good idea, no question it's going to be extraordinarily helpful to patients and the healthcare system it's just – it's very new.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Agree.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Does that sound reasonable?

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yes.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Okay, well now I'm going to go onto one that's really not controversial at all I hope and that is medication reconciliation where care – it's a core requirement for eligible professionals, hospitals and critical access hospitals who receive patients from another setting to perform medication reconciliation and we see the standards maturity on this one it's 3 highs and 4 lows, and the development effort is 2 mediums and 4 lows.

And what I'm trying to figure out, Michelle, maybe you could help with this, is given that medication reconciliation has been in Meaningful Use Stage 1 and Stage 2, and Stage 2 already requires the demonstration of medication reconciliation with an incorporated C-CDA firing off decision support and all the rest I'm really unclear why this one is different at all from what already is in certification for Stage 2.

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

It's not, there's no change from Stage 2.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah, it surprised me too John it's already required.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

And there is no change in the threshold. I was totally surprised.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

The standards maturity of the C-CDA enumerating medications that can be incorporated in an EHR is high and that it is a Meaningful Use Stage 2 certification criteria and development effort would be low it's already a Meaningful Use Stage 2 certification requirement.

**Kim Nolen, PharmD – Medical Outcomes Specialist – Pfizer, Inc.**

Hey, this is Kim.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

Yes?

**Kim Nolen, PharmD – Medical Outcomes Specialist – Pfizer, Inc.**

I have one comment about that and just put it in relation, sorry, I'm in the airport, put in relation to what you all were talking about with the previous one –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

Yes.

**Kim Nolen, PharmD – Medical Outcomes Specialist – Pfizer, Inc.**

Where the people – some of the end-points where you get the data are not as developed and robust as they need to be, I think the same thing happens with medication reconciliation because maybe the pharmacies aren't providing it or the payers aren't providing it. So, the standards there that all the information is not flowing as it should would be my one comment.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

So, that's a very good point. So, maybe Michelle we qualify this and then we say, although standards maturity is high and development is low in practice the ubiquity of comprehensive medication information being sent in the C-CDA by trading partners is actually somewhat immature at this point.

So, it's just sort of – it's a reality of implementation as to whether or not you'll be able to do medication reconciliation from existent data sources.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

This is Floyd.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

Yes?

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

I would agree with everything you said, I just want to clarify that immunizations are not included in medications or they are?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

Immunizations are not.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

Right and that's –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

And we're going to discuss that next.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics –  
Tenet Healthcare Corporation**

Yeah, I was going to say there is an immunization measure this time.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

Right that's fine. I just want to make sure this and that were not connected.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

Yeah not at all.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

Okay.

**Lisa Gallagher, BSEE, CISM, CPHIMS – Senior Director of Privacy & Security – Healthcare Information & Management Systems Society**

John, this is Lisa Gallagher, I think HIMSS, we agree and the only thing we noted was, you know, the transition of care to long-term care facilities and that medication reconciliation is still a challenge in that transition.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And I think that's also a very valid point that the long-term post acute care facilities often lack EHRs that are Meaningful Use certified.

**Lisa Gallagher, BSEE, CISM, CPHIMS – Senior Director of Privacy & Security – Healthcare Information & Management Systems Society**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And so hence it's not so much a standards issue or development issue it's just the reality of who has products and who is using those products.

**Lisa Gallagher, BSEE, CISM, CPHIMS – Senior Director of Privacy & Security – Healthcare Information & Management Systems Society**

Exactly.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, Michelle, we'll reflect that comment. Okay, now Floyd onto immunizations, core for EPs, hospitals, critical access hospitals receive a patient's immunization history supplied by an immunization registry or immunization information system allowing healthcare professionals to use structured historical immunization information in the clinical workflow.

And the certification criteria are ability to receive and present a standard set of structured externally generated immunization history and capture the act and data review within the eligible professional and eligible hospital practice and ability to receive results of external CDS pertaining to a patient's immunization.

So, on this one what you see are 5 mediums and 2 lows on the standards maturity, development effort is 4 highs, 2 mediums and 1 low.

So, let me just try to parse this into what I see as the two issues and of course Floyd, please, comment. On the one hand we do have exceedingly robust mechanisms of sending data from an EHR to an immunization registry, the standard HL7 2.5.1 transaction, and although the CDC does have an implementation guide for the querying, it's kind of a query response type transaction to query an immunization registry, I am unaware and maybe others on this call are aware of a public health department at a state level that has implemented a query response EHR feed using the CDC's existent query response standard. So, it's been balloted and it exists I'm just not aware of it being used in that respect, but other comments welcome.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Not here, we don't have it.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

So, this is Floyd, having done some review of that process for another project I believe there is one or two, there are one or two that might have done that but it's very uncommon and the other issue that plays here is even though 2.5.1 message is required not all registries are yet able to receive it.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

And the method of transport is very variable across the country.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right, because folks remember that there was not, in Stage 2 even, a certification criteria for the transport method of immunizations and so Karen and I are actually going to have a conversation about in the lack of any specificity what you're going to get, as Floyd points out, is 50 different approaches to immunization data collection in 50 states.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

Actually more than that because they are more registries than states.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right, yeah, so you get cities, you get, ah, so you've got that. Now the second issue, as we look at standards maturity, is note this one has ability to receive results of external CDS pertaining to a patient's immunization, that's the Health eDecisions set of standards through the S&I Framework, which has been defined and again, it's like some of these other things we've been describing, I think incredibly novel, useful, interesting that an EHR would be able to receive externally authored rules about what immunizations should be given to a patient and what circumstance, and all the rest, I'm unaware of any EHR in production today that is able to consume a Health eDecision's decision support rule in that respect. And just happy to get input from anybody else who might have worked with Health eDecisions.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

This is Floyd, I can't say I've done a lot work with Health eDecision but I would support your comment. There is an additional decision support recommendation that came from CDC called the CDSi, CDS for immunization, which is a set of tables that help traverse the complex immunization table and many are looking at that to either use internally in the EHR or through a web service, but it's still very early in that implementation and the issue of using HeD with CDSi is now being explored but this is all very new.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, what we have here are two sets of standards the query response standards which I would postulate are low and the capacity to consume external CDS or, as Floyd just said, do a web services call with real-time data which I would also postulate as low, but, you know, here we have some votes for medium so I'm happy to be talked out of it.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

John this is –

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

Well, I apologize I hadn't voted, so I would put mine in for low.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

So, this is Leslie and when I looked at this on the external system I was looking at it in terms of how we're using the InfoButton today.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yeah.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

To get to an external software service for documentation or a CDS and that we're in the millions of users already between the NLM and all of us in private industry. If that were the approach used to get to an expert system that's one approach to get to CDS, it doesn't get to – we're not passing the patient name or PHR we're just able to get to an external system, so that's a possibility.

The other comment that we had on the above item to report the immunization, the discussion is if we built it or define it they will come, but absent that we really will never move that agenda without naming a standard because there isn't a way to get consensus formed across all of these population health receivers of that information.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Correct, well, absolutely and so –

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

So, yeah.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

I think the intent of this one and Michelle maybe you can clarify, is that it was not using InfoButton in fact it was trying to actually receive structured decision support rules that would fire off based on patient specific data elements.

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

Yes, that's correct, John.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yeah, that's my understanding. So, if, you know, again sort of strawman would be on both these things it seems like standards maturity – I mean, Leslie to your point, very desirable goals to society it's just that the reality if we phrase it as not InfoButton is the maturity is low and the development effort of doing both of these would be high given that they are both novel workflows that just don't exist outside of maybe one or two pilots.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Agree.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Okay.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

And this is Floyd, don't get me wrong I think this is a wonderful goal I just think it's not ready yet.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yeah.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

So, I would agree with you.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

But is there a way to identify this gap of ability to have consensus at public health for the purposes of standards and – because we're going to come across this whether it's immunization or whether it's any of the other areas and that then gap is prohibiting us to name EHR standards for this as well.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

And, how do we make a recommendation or identify this kind of gap?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right, so let's flag that Michelle as one of the important gating factors to get to this goal is to offer more specificity on public health transport standards so that in effect an EHR would only have one implementation to get immunization data to and from a public health entity and we just don't have that level of constraint at this point.

And I know why, I mean Farzad was concerned that public health entities have invested millions of dollars in creating propriety solutions and the likelihood of them finding funding to change all said proprietary solutions in one year was small.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

But we directionally better get there.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

And the directly appropriate signal might be one we use here.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yeah.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

This is – a directionally appropriate standard could be the following –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

And not name it in Regs, but then the next time we revisit this come back and see whether there's been market adoption because there has been simply something stated.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right, so I would –

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

The e-stream is directionally appropriate.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, for submission the answer is transport should be done via Direct because that's what we're doing for everything else so why should public health be any different.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Query response is still a work in progress those are certainly some tests that have been done in various RESTful type approaches.

So, if we move onto another public health, registries, so registry is electronically transmit data from an EHR in standardized form, this is menu set, data element structure and transport mechanisms to one registry and reporting should use one of the following mechanisms, upload information from an EHR to a registry using standards and leverage national or local networks using federated query technologies.

So, discussion, the certification criteria allowing an end-user to configure what data will be sent to registries, registries are important to population but there are concerns this objective will be difficult to implement. And so, I think probably all of us on the phone have implemented registries whether that's the Northern New England Cardiovascular Study Group or the National Trauma this or that, and my –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Or the tumor this or that.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right and my experience is that every registry has a completely novel set of data requirements and I have yet to encounter a registry that has a canonical, you know, this is the content standard vocabulary standard and transport standard it's all been one-off. But are there others?

I mean, Floyd, especially with your work on quality in the past have you seen registry submission standardized or regularized across various registry providers in any way?

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

Not yet, no.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

But –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Go ahead?

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Well, John, I was going to ask, I know it's a menu item but if it's – is it even doable, I mean, again, is this sort of putting a marker out there to say we should be going in this direction thinking that no one will choose the menu item.

I don't know how you do it but at our places we look at all menu items as we should be preparing for the future. So, we may choose, you know, 3 of the 6 or 5 of the 10, but we are preparing for the other 5 or 3. If that's a – and this one I'm not sure how I would get ready for the "Stage 4" if I weren't going to do it in 3. Is that – am I thinking rationally or do you think differently about it?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Well, so one wonders, I suspect you do send data to some registry for some purpose.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

We do.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And probably its quote and comma delimited text files sent via SFTP, I mean, I'm just guessing.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

That would be correct.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

That's true.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

It is true.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And so one wonders on this one, it says using standards. I'm not sure how we could enumerate a finite number of standards that would be used for registries as you've just suggested, you know, as we think of giving a market signal.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Now we could say we think Direct is a good way of delivering a payload, oh, that's fine, but so in this one I would think standards maturity is low if what you're talking about is having some sort of universal mechanism of arbitrary content to delivery to an end-point transport could be standardized as Direct, vocabularies, you could enumerate the usual –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yes.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

SNOMED, RxNorm, LOINC that sort of thing.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yes, yes.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, maybe what we do is say, hey, vocabularies and transport could be provided but content doesn't really even exist as a standard for this purpose at the moment.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

John, it's Leslie, what about X12, I mean, that's the only place we're doing any sort of population upload and maybe it's worth learning a little bit from the payer's side, is there something that we could learn from, not this time, but in the future to help us with these kinds of population-based uploads.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And the answer is of course it depends on what is the data element that the registry requires and if it is of an administrative nature absolutely X12 could be helpful. But the data elements in things like Northern New England Cardiovascular Study Group would be, you know, aortic surface area.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Yeah, so forget it.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

In which case you'd never get such a thing. And then on the development effort if the nature of this one, as written, is a user will be able to designate an arbitrary set of data elements in the EHR to be exported to a registry in an auto-magical way that would be an enormous development undertaking. In fact, you could even argue Liz it may not even be doable.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right, which is, yeah, which is your comments are very well taken in terms of are we giving it a signal or are we asking for something we're just not there yet is it –

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

Yeah and I would question the same thing that came up on immunization registries that there needs to be some mechanism to have the receiving ends be consistent in some way. Is there anything about individual registries having to be able to participate, have some consistency of practice, because otherwise they're all going to be one-offs anyway?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right and this would be the notion of the payloads all being sent via Direct and using these controlled vocabularies that the VSAC at NLM, the Value Set Authority Center, curates, you know, that might be a nice way at least Floyd of getting us closer.

**Floyd Eisenberg, MD, MPH, FACP – President – iParsimony, LLC**

Yeah, I just think there should be something; otherwise what ends up is they will choose the registries that's the easiest but not necessarily the ones that might be best for their care.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yes.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Wasn't there a minimal data set work being done on registries? Back to your point, John, that it's pretty useless if we're not getting to the specificity required –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

To affect change in care.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And I've never seen any work across registry providers on a minimal data set. And, so, you know, what I often tell people is if you look at the Meaningful Use common data set and you try to craft your quality metrics or your registry around that you'll have a pretty good chance of success but if you say "oh, I've decided this quality measure absolutely depends on hair color" you know you're probably not going to get that electronically.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

You're probably right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, Michelle, maybe this one what we will summarize and say that the standard maturity is low, development effort is high, but we think that signaling that registries should use Direct as a transport mechanism and use controlled vocabularies as the country works toward more of a common form of content for submission to registries is certainly a good signal.

Okay and now electronic lab reporting, another population public health, core hospitals and critical access hospitals submit electronic reportable laboratory results for the entire reporting period to public health agencies in accordance to the applicable law and practice. We have standards maturity 3 highs, 2 mediums, 1 low and development efforts 3 highs and 3 mediums. Okay, so this one, Michelle, also confuses me.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yes.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Because this is a certification criteria for Meaningful Use Stage 2 in which there are 9 complex cases that every vendor must fully demonstrate the capacity to do this. So I'm not quite sure how this one has changed from Stage 2.

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

This one also hasn't changed at all from Stage 2.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah, I think the only – let me ask Michelle one question. I think today that, and it may not be in this part of the Reg, but one of the things that is absolutely required today, although we are still struggling with some of our public agencies being able to consistently receive it, so in other words we keep sending test cases and rechecking with them and saying "are you ready, are you ready, are you ready." I'm assuming that's the same expectation going forward. If they can't take – you have to be able to send it but if they can't take it, they can't take it. Is that fair?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

I mean, to me attestation is a function of sending.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

No so much receiving and I would concur with you that we have two public health entities in Boston, the Boston City Public Health and the State DPH, and for the last 2 years we've been going back and forth with various types of immunization, reportable labs, syndromic transactions to get them tidied up to the point of not so much on our sending side but on the receiving side –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yes, that's it.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

That they pass.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yes and then otherwise I agree with you John this is not different. I'm not sure why we're getting the high kind of development, high, low on standards, I'm not – I don't get it.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And I would bet –

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

It's –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

It's exactly what you said, which is it's the experience everyone has had with the actual implementation of these things in the field –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

That the department of public health's are not unified. Michelle, go ahead?

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Oh, this is Leslie, I just had one question on this, was this an attempt to – discussion about the clear requirements so that hospitals had to start reporting not just in their inpatient setting but also in their commercial laboratories, is this part of that? Is that what makes this different than Meaningful Use 2?

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

There's a separate measure on that.

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

Yeah, that's the hospital measure, that's a different measure.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

It's a different measure so they're not related. Okay, thanks, Michelle.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

So, on this one if we simply telegraph, as we did with the others, that it's very important for departments of public health to have consistent implementations and constraining transports to Direct would be a good idea because it would certainly make implementation of the actual transaction much easier, but for the moment the maturity of the payload is high and the development effort I actually think is low.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics –  
Tenet Healthcare Corporation**

Right, right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

Because it exists.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics –  
Tenet Healthcare Corporation**

Right that's my – that's where I am.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

Yes, okay, well, the last one on public health is syndromic surveillance, hospitals and critical access hospitals core, submit syndromic surveillance data for the entire reporting period where this one was standards maturity 1 high, 2 mediums, 3 lows and development effort 3 highs, 2 mediums, 1 low. And Michelle, I'll ask the same question –

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics –  
Tenet Healthcare Corporation**

Yes.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

This is a certification criteria for Meaningful Use Stage 2 for which you had to demonstrate full capacity to do this already.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics –  
Tenet Healthcare Corporation**

Yeah, I feel the same way it's kind of the same play different act.

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

Yes, exactly, the only difference is actually it's a menu item for EPs in Stage 2 and we took that away in Stage 3. So, it's actually easier.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

Yeah, so I would postulate it's exactly the same thing we've been saying which is the standards are highly mature and development is low, the challenge is, is that in real life implementation you're dealing with a variety of non-standardized transport mechanisms and diversity and the capacity of public health to receive these standardized transactions.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics –  
Tenet Healthcare Corporation**

Agree.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel  
Deaconess Medical Center**

Okay, well, Michelle I think that's all 19.

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

That's all of them. I do have a question that Arien had brought up the last time.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yes?

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

He had asked that we also look at the provider use effort which I've added to all of the slides and come up with an overall effort and I don't know if we want to take the time to do that or just leave it as it is?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Well, and so that is – when you look at workflow implementation issues I think there are probably two answers to that. I believe Liz you and Cris are going to actually probably enumerate that implementation challenge workflow intensity kind of stuff in your discussions?

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

We will, right now we're of course working on 2015 edition and then we'll go to this part of it, we're having a hard time resisting I'll tell you, but, yes we will.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And that, you know, certainly I'll be presenting this at the Standards Committee meeting on Wednesday and I can reflect I think what the group would probably suggest Michelle and that is that each one of these is noble. Each one of these stands on its own as a project that's probably doable except maybe, you know, as we discussed there were some of those like, you know, arbitrary registry creation or immunization query response and those maybe just on the edges of doable.

But the collective burden of doing all of this simultaneously at the same time you're trying to do ACA and HIPAA Omnibus Rule, and ICD-10, well of course ICD-10 will be done this year in theory, is probably pretty overwhelming.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Could I just ask one question John?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yes.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

About – I don't know if we covered it and somehow again I was putting together just some data from my team on Stage 3 possibilities, and I can't remember us talking about, on the CQM side, the potential requirement to stratify 1 CQM report by disparity relevant to the provider, is that outside of our bailiwick because it's quality measures or –

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, Michelle, maybe you could comment on how CQMs have been in some ways removed from Meaningful Use but still made a requirement.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

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

Well, actually, so the Quality Measure Workgroup has their own separate set of Stage 3 recommendations.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Okay.

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

But, Liz, to your point that was part of the Meaningful Use Workgroup's recommendations that you be able to stratify and I did not include that here, but probably should have, so maybe if you have a comment about that we can add that.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Well, I just wanted to put it out to the group. I mean, I – you know, I'm just trying to think about it and again, I'm not thinking about standards, John you're 50 times better at that than I am, but I am definitely an operational person and I'm trying to think of the ramifications that what we'd be reporting about disparity.

I mean, so maybe I'm misinterpreting it, but when I read it I thought about, you know, all of the work that was done in the variety of places that we can all name about disparity based on location of patient or race of patient, or whatever and I thought what I was was reading is it would become a provider job to now somehow report that publically if they thought it was – I was really confused, I'm just – I'm trying to wrap my arms around it in all candor.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

I think, this is Leslie, I think the idea was that we have the ability now to be able to report on some social determinants of health and disparities and so there is work I know being done in NQF this next quarter about coming up with definitions and standard vocabulary and discussion around disparities information as well as social content.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

From a population –

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

So, I think that's coming.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah, from a population health perspective not specific to an individual provider I not only agree with you but think it's something we should be looking at for all kinds of reasons, you know, social, moral, etcetera.

I'm trying to figure out, at Beth Israel I'll just pick on John's group instead of my own, what would John want to – first of all is this population large enough and is he supposed to compare to other populations. And my population maybe large because it's obviously multistate, multihospital, blah, blah, blah. I'm searching. John what do you think?

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yeah, no, I mean, this notion of being able to do the stratification of our quality measures and, at least the way Beth Israel Deaconess has done this, is that we have had to take multiple institutions, multiple EHRs, consolidate into a common registry and then do the reporting off that common registry because it was actually impossible to compute the numerators and denominators from a singular data source.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right and so I'm thinking – so from that premise in exactly the same way I'm thinking – we have a much larger database so to speak, but when I think about the individual EH sitting out there or the individual – I think this is related to EH, I could be mistaken, Michelle, you can help me with that, but I'm just thinking about, you know – hospital in, you know, Georgia one hospital or – and I can name several other people, one hospital how would they do this?

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

Liz, this is Michelle, so they didn't actually specify but I do think sometimes in the Meaningful Use Workgroup they tend to talk more about the EP side than the EH side.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

They do, you're right.

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

So, that might be a consideration that we should have them think about.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Yeah and even there again if I were a solo practitioner in a, you know, small rural area – and again, obviously you could apply for an exception – I'm just trying to think of – I understand why the reason why it's a good idea and it's something we ought to be studying and really looking for ways to fix the problem because it is a real problem. I'm just trying to figure out how we do it in Stage 3. I thought I'd bring it up, it certainly caught my eye.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yeah.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

And I think it's also related to the population health question of who is the receiving body and how do we have – body or bodies of this information in order to do that comparative analysis.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

And do we have – and can we mandate a standard at that receiving entity. So, I think, there's something – there's definitely something here that everyone rallies behind this so this is good now tell us more about how this should be implemented, what's the overall vision, what's the problem we're trying to solve?

Now maybe it's by first step just being able to articulate all of these fields the race, the ethnicity, the social standing, the economics, sexual orientation, gender all of the things that are coming up yeah that's great now how will we use that information in the future and having that vision before we set the data criteria could be helpful.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yes.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Well again, because it says, requirement to stratify one CQM report by disparity relevant to the provider. I just think John that if – at minimum whether we ask more questions or we just bring it to the attention of the Standards Committee or something it just didn't feel like it was one that should be left off the table.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Completely agreed and having just finished the certification of all Beth Israel Deaconess Systems for Meaningful Use Stage 2 I can tell you the CQM certification was particularly challenging because you had to demonstrate the capacity to do a whole variety of these stratifications for a whole variety of patients, and a whole variety of time periods. So, there absolutely needs to be attention paid to the burden of, as you suggest, collecting the data to stratify and actually mechanically doing the stratification.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

So, good. Well, Michelle, I think we have performed the task we were asked to perform purely because I have been asked to do a special favor for the Moore Foundation I will be flying to Baltimore Tuesday night, weather permitting, and we'll join the Standards Committee and do this presentation from downtown Baltimore. So, the show will go on Michelle don't worry.

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

So, John, I think the next steps will be to redistribute that I captured everything correctly.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Yeah.

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

And it will be shared at the Standards Committee.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

And we will do as we have done before if you draft that I will review and make sure all the comments of all the members on the phone today were recorded and then come Wednesday I will present them and I certainly want to thank this taskforce very much because I think we have gone through a lot of material with a lot of detail and we will be able to give the Policy Committee meaningful input. So, Michelle any closing words of benediction? I believe do we have a public comment period?

**Public Comment**

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

Yes, so operator, can we please open the lines?

**Caitlin Collins – Project Coordinator – 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 do not have any comment at this time.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Very good.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

All right.

**John Halamka, MD, MS – Chief Information Officer – Harvard Medical School/Beth Israel Deaconess Medical Center**

Well, thank you so much everybody I hope you have a great day and if you are going to be hit by whatever this next storm is may the snow be light and your day be easy.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

All right thanks John, thanks Leslie.

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

Thank you.

**Elizabeth Johnson, MS, FHIMS, CPHIMS, RN-BC – Vice President, Applied Clinical Informatics – Tenet Healthcare Corporation**

Bye-bye.

**Leslie Kelly Hall – Senior Vice President of Policy – Healthwise**

Bye.

**Kim Nolen, PharmD – Medical Outcomes Specialist – Pfizer, Inc.**

Bye.