

**HIT Standards Committee  
Clinical Operations Workgroup  
Transcript  
August 9, 2013**

**Presentation**

**Mary Jo Deering, PhD – Senior Policy Advisor, Office of Policy and Planning – Office of the National Coordinator**

Thank you very much Operator. This is Mary Jo Deering in the Office of the National Coordinator for Health IT. This is a meeting of the HIT Standards Committee Clinical Operations Workgroup. It is a public call and there will be an opportunity for public comment at the end. And I would remind all of the speakers to please identify yourselves, because a transcript will be made of this meeting. So I'll begin by taking roll. Jaime Ferguson?

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Present.

**Mary Jo Deering, PhD – Senior Policy Advisor, Office of Policy and Planning – Office of the National Coordinator**

John Halamka?

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

Present.

**Mary Jo Deering, PhD – Senior Policy Advisor, Office of Policy and Planning – Office of the National Coordinator**

Martin Harris? Chris Chute?

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Present.

**Mary Jo Deering, PhD – Senior Policy Advisor, Office of Policy and Planning – Office of the National Coordinator**

Thank you Chris. Cris Ross? Dan Vreeman? Donald Bechtel? Liz Johnson? Floyd Eisenberg? Jeremy Delinsky? John Klimek? Joyce Sensmeier? Kevin Hutchinson? Kim Nolen? Marjorie Rallins? Becky Kush? Stan Huff? Wes Rishel? And would other Federal or ONC staff please identify themselves?

**Farrah Darbouze, MPH – Program Analyst – Office of the National Coordinator**

This is Farrah Darbouze in ONC.

**Kevin Brady – Group Leader, IITL Interoperability Group – National Institute of Standards and Technology**

Kevin Brady from NIST.

**Terrie Reed, MS, MSIE – Associate Director, Informatics – Food & Drug Administration**

Terrie Reed from FDA.

**Mary Jo Deering, PhD – Senior Policy Advisor, Office of Policy and Planning – Office of the National Coordinator**

Thank you very much. I'll turn it back to you Jamie and John.

**W**

I'm calling in for Dr. Harris.

**Mary Jo Deering, PhD – Senior Policy Advisor, Office of Policy and Planning – Office of the National Coordinator**

I'm sorry, would you repeat your name please; I didn't quite get that.

**W**

I'm calling in for Dr. Martin Harris; I'm going to transfer the line to his cell phone, so he should be on in just a moment.

**Mary Jo Deering, PhD – Senior Policy Advisor, Office of Policy and Planning – Office of the National Coordinator**

Oh, I see. Thank you. Do you want to go ahead Jamie and John?

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Yes, why don't we – let's go ahead. So thanks everybody for joining the call today. Our agenda, if you recall from our previous discussions on image sharing, we've heard about some different technologies so far. I know we want to be able to consider different – additional different technologies and standards, but we wanted to do that within the context of use cases. So now that we've had essentially some introductory overviews of use cases that are facilitated by some of the pilot and production technology that's out there. We thought that it would be very useful to figure out the small number of use cases that we really wanted to focus on and discuss additional detail about the scope and the limits of those use cases so that we could then bear in mind essentially their requirements as we go and look at the different potential standard – or different possible – or candidate standards for recommending to the Standards Committee.

So that's the attended agenda item for this call. Is there anything else that we need to discuss today?

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

This is Clem and I'm sorry, I just got on, but there was some talk about discussing further about extending more clinical data coming into EMRs rather than just the things going out from them.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay, so, I think that is a different agenda item. I agree that we wanted to talk about that, but I don't think that's for today Clem.

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

Oh, I misunderstood. I thought I heard at the last round that this was what today was talking about. I guess not, I mean, you know the facts.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

So this is – so we wanted to talk today about the image sharing use cases, excuse me.

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

Yeah, all right. I understand.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

But I think that we also wanted to consider, for example, EKGs, which aren't images. But I think it really is –

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

Well, I – yeah, EKGs –

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

– the purpose of today’s discussion really is more about limiting the scope of the standards that we want to recommend to specific use cases that could be really useful for certification and then I think we’ll have a different discussion about expanding the range of data, if that makes sense.

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

Yeah, well, I think they’re completely different subjects because the range of data doesn’t need images at all to make a lot of progress.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Yeah. John, any comments you want to add to introduce the meeting.

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

Right, and so recognizing that Clem, you’re completely correct, that is, as we look at various types of text-based data across laboratory, radiology, pathology, cytology and every other ology, there are certainly some gaps to cover. I think that is an important topic. Today’s topic was to thinking as we have over the last couple of discussions, provider-provider, provider-patient, provider-group image exchange. And not only DICOM type images, but things even like EKGs Farzad has asked us to take a peek at, which are waveforms or time series, these are more of sort of binary BLOBs, and how do we deal with a binary BLOB problem. And do it in a way that we feel like we can have traction, because there are, as we’ve – Jamie said, a lot of use cases, but we want to make sure we get to some definitive answer in a relatively short period of time, for at least a constrained set of problems. And we also recognize there are multiple stakeholders and there are probably some stakeholders we haven’t heard from yet and we should probably enumerate those as we reflect on the use cases that we’re going to scope.

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

Well I’ll just listen.

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

Well of course we want your input, too.

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

No, I didn’t mean that with any huffiness, it’s just that I’ll catch up with the discussion by listening.

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

Okay.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay, well thank you. Any other comments on the agenda for today? Okay. Then the use cases that we previously discussed at a very high level were provider to consumer image sharing, clinician-to-clinician image sharing, care team or network or community-wide image sharing, as well as consumer-mediated provider-to-provider image sharing.

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

Could I just clarify, when you say provider, is that the image provider or is that some kind of provider who’s ordered an image?

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

That's – I think that's exactly what we wanted to discuss today is what is the real scope? I mean –

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

Okay.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

– so is the provider the sort of the image source, which might be a radiology enterprise or a Radiology Department or is it a – is the provider in that case a physician office, I don't know.

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

Well, I mean, the word provider is usually short for care provider, I just – but sometimes it's more general, I just wanted to clarify. I think if all those other communications are perfect, and no one's getting the images from the original source electronically, I think they're going to be relatively moot.

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

And so I think this is a really interesting discussion Jamie, that you've raised, which is there – it's a bit like our previous discussions on interoperability standards for vocabularies. Do we force every EHR internally to use a control vocabulary, well know, but over the wire we do. So as we talk about images, which is our scope, to include modality to PAX or image center to EHR or is it PAX to PAX and EHR to EHR, that is it's one level removed from the actual ordering and resulting of the image. Because that's in some ways a problem that has been largely solved.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Right.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

This is Chris Chute. This is a sort of a disconnect, and I don't mean to pursue the agenda further, but maybe as a placeholder John and Jamie for a future meeting. I really think we need to have a discussion about the wisdom of imposing standards at the level of the wire and not pushing back further into records, whether it be vocabulary, whether it be data elements or some other model. I'm not saying that we should have a standard EMR data model, but I do think that many activities that we want to do clinically, for example, decision support and the like, are hampered for lack of interoperability and consistency within the EMR, at least of data elements and vocabulary. So that's my placeholder item.

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

So, very timely point. I was on the phone with a reporter an hour ago who said, I hear that the data standards in healthcare are woefully lacking and I said, "What do you mean by that?" He said, well, there's this vendor, it's a very large vendor, it's a vendor whose name begins "E" and it turns out that they don't use RxNorm, the mandated Meaningful Use Stage 2 standard inside their EHR and that's going to cause data integrity and interoperability problems. So, your point is well taken.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

So, just to – perhaps we could get back to the use case discussion by picking one use case to start fleshing out and, so which one – what do we think is the highest priority? Is it really for physicians to be able to get images to their patients or is it for a care team sharing within say an ACO in a community. What is the top priority here?

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

I'll say it again. If the modality of the PAX is out of our scope, because that's totally closed, but if the producers don't send the images electronically to somebody, there's no other sharing's going to happen.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Um hmm.

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

So I seem it's got primacy in some fashion.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

So what I'm hearing is, so I would interpret that, or I might interpret that as saying that radiology to physician office is the first priority?

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

That's what I would think, but I'd like to hear others.

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

So, I will agree with that Jamie. Let me give you the couple of use cases that have come across my desk in the last week. Beth Israel Deaconess does a fair amount of work with Children's Hospital because Children's Hospital consults in our NICU. There is a disconnect between Beth Israel Deaconess NICU docs and radiology providers at Children's, who may be both imaging and interpreting GI studies, CT scans, things that could be of great clinical utility to the NICU provider, but at the moment all they get is the report. So – and I get this across multiple -ologies every day, it's somebody is ordering and gathering the image, but then somebody else needs to consume it and they can't. And these are mostly, as you suggest, sort of in the clinician-clinician case. And of course I love the notion of patient-mediated clinician exchange, so, if we start with clinician-clinician, is it too much of a stretch to include in that, patient-mediated clinician to clinician?

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

Well I think that's a nice thing, too, but I think being realistic, it's not going to help the movement of radiology images very quickly. What do we got, 3% of patients dealing with PHRs or something now, or 5 with their own? A little more when you ta – a lot more with portals, but that isn't getting the images out. I'm for it, I'm fully for it, but it just seems like there's a natural progression to get the images to someone who initially needs it and then there's – whether that be IHE, it could be an IHE as well, then everybody can get at it. But somehow that first step, if it doesn't get released to someone with a standard, we're not going to get it – the secondary movement's not going to happen.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Right. So I would also – I would just say that the idea of a CC list and a referring or consulting list as additional sharing from the radiology source to me would be a natural part of this use case. Rather than assuming that the ordering system or the ordering physician's EMR would have to essentially be the receiver and act as the broker of a received image.

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

Yeah, I agree. And then we – the patient one is fine too, but if we don't have that one strongly defined, I think it's going to be problematic. There's a lot of silence though, so I don't know if anybody likes that.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Well – and so actually, it's interesting because what we're – what I think you're saying is that the consumer is just another recipient like another physician office –

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

Yeah.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

– potentially, of the image from the radiology source.

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

Yeah. Actually, if the patient wanted to get in the loop, I think that we need to consider that at registration time or check-in time, there needs to be a field that the patient can assert to whom stuff goes, because the intermediate link won't be known, whether it's – EHR or whatever.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

For purposes of this kind of a use case discussion, can we substitute a personal health record system for the patient? Can we say that the patient's personal health record system needs to be a recipient from the PAX or the radiology enterprise.

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

Well that makes it more tangible. I guess you can –

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

How do others feel about this twist?

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

Well so Jamie, when we think about our healthcare information exchange in Massachusetts, we actually don't specifically enumerate that the endpoint is a payer, provider or patient. What we say is, it is a Direct compatible receiver, right? And so in that case, if there's a PHR that can receive a Direct message, it is equally as valid a participant in the HIE as an EHR or maybe as a payer system.

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

Yeah, that all sounds good.

**C. Martin Harris, MD, MBA – Chief Information Officer – Cleveland Clinic Foundation**

Jamie, this is Martin Harris. Are you assuming that any consumer or patient-related features would then be the function of the PHR? So just delivering to the PHR at the Cleveland Clinic, in my mind would be delivering as if you were providing it to a provider, until the images that I received – they'll be many more of them, they can be complex, because I would expect my provider to be able to navigate it. Who's responsible for making it consumer consumable, if you will?

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning, Fellow, Institute for Health Policy - Kaiser**

Yeah, consumer-friendly if you will?

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

Well, the PHR can do that, and there's not another – I mean, are you going to send it to their email, just have them – I mean then – it gets complicated if you're just sending it to the patient by name. I mean, what really is it going to?

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

And this gets into some of the –

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

And I think when you're talking about a PHR at an institution, mostly those are portals really, and it's really the content of the electronic medical record system and the address is probably the institution, isn't it? Or do you have sub-PHRs at Cleveland Clinic? Do you have – where they're really their own stuff, they control it, and no one else does anything with it?

**C. Martin Harris, MD, MBA – Chief Information Officer – Cleveland Clinic Foundation**

Well we work with PHRs that are tightly coupled, so it's actually someone else's PHR that's controlled by the patient.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Yeah and ours –

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

Well, I'm just trying to clarify. All the big hospitals have portals, and they're described as PHRs because the patient can look at all their stuff. But constrained to the stuff that's in that institution, are you –

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Yeah. Clem, I'm agreeing with you. This is Chris Chute from Mayo Clinic, and at least in our organization, the structure is more or less as you characterize it in that what we call a PHR is, in fact, a derivative of the EMR and patients can access it, I think they can annotate it to some extent. But for the most part, when we're talking about clinical data, it is a derivative of the EHR.

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

And that's to contrast with their own thing, whether it's whoever produces or puts it up, Microsoft, HealthVault or what other organization is providing it. But then that's their thing and it isn't – it doesn't have any data unless they've taken some action.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

That's right. I mean you get into definitional issues of whether in fact it's a provider portal versus a proper PHR, we could have that semantic debate. But, I don't know what the statistics are, it would be my speculation that the vast majority of patients in the US are working with de facto patient portals rather than –

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

No, that's absolutely true.

**C. Martin Harris, MD, MBA – Chief Information Officer – Cleveland Clinic Foundation**

Yeah.

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

But the portals aren't set up usually to take in data from anywhere, because the institutions have anxiety about that. We could go on to that at length.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Well I like the term that Martin introduced of consumer consumable images –

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

Okay.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

– because I think that’s a key differentiator in image sharing from the – sort of the DICOM XDS type of sharing from a PAX system is – at least to my way of thinking, that’s not consumer consumable.

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

Right. Yeah, that’s a good point.

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

So Jamie, this gets back to the IHE presentation that we had, which is on the one hand there are DICOM objects, which may be large and complex, and on the other hand, there may be what I’ll call a thumbnail view, a JPEG extract, something that is more consumer digestible. And one wonders, as we talk standards, is it the notion that we deliver the package to an endpoint. Whether that’s EHR, PHR, payer, repository, whatever, but that it’s up to the repository to decide how that gets viewed, either by the clinician who needs high granularity and measurability or the consumer who might want to just see a JPEG of their fracture. How far in the stack do we go?

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

That’s a good set of questions. I mean we could take it a step further and talk about PDFs, that’s how most endoscopists send their images. It won’t work for radiology. A lot of pathologists do that now, too.

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

And so what I wonder Jamie, as we have sought testimony from a number of folks, we heard from lifeIMAGE, we’ve heard from the IHE folks, there are certainly others who have asked if they can testify to us about standards that they think are more consumer technology friendly.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Um hmm.

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

But again, do we get into the viewer or are we talking just about transport of the image as it is either exiting the modality or in the application that is the initial recipient from the modality, because pretty much all of those are just native DICOM. And so, as we’ve talked about before, there’s the inside the institution and there’s the between institutions and certainly the between institutions doesn’t seem to be as well, either specified or without some optionality. There’s a lot of potential ways of getting data between institutions and not a lot of standardization.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Well it seems to me that from a use case requirements perspective, it could be useful for us to distinguish between the institution-to-institution or enterprise to enterprise sharing versus the enterprise to individual or enterprise to consumer or patient sharing.

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

I think –

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

And then there may be some of the technologies that we consider or some of the architectural patterns could fit multiple use cases within the same pattern or standard. Does that make sense?

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

Jamie, you started out with a discussion of getting it to the copy to's and all that and I don't know where they fall, but I think there's probably division between institutions and institution and to individual providers. I mean, because of the different technology needs.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Yeah. So, do we need then potentially different use case scenarios, for example radiology to hospital versus radiology to small office practice versus any of those actors to consumer?

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

Well my – the consumer and the small office practice might not necessarily differ a whole lot, especially the way John described it, you know, just an address. And they may not want the heavy duty either.

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

I think, so Jamie you raised the point, are we doing software application to software application, and that is in effect like enterprise-to-enterprise, in which case it is then the application's role to distribute in an appropriate viewable format, all we did was get it to the application. Versus, the other approach is to in effect sort of deliver it to the person, in which case our standard would take the responsibility for the repackaging and viewing capability.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Those are very good distinctions.

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

Things like vendor-neutral DICOM readers get into the picture of the latter or, as we talked about JPEG conversions or some of these other standards that we heard about our emails and last call. In some ways, I mean when I think of all the ways in which today I exchange images, I have DICOM push, which is very proprietary, it's IP address to IP address, VPN based. And we heard that there were actually a variety of emerging standards that are Internet friendly and SOAP that would actually allow me to get away from VPNs and IP address DICOM push. So that problem of enterprise-to-enterprise exchange using Internet friendly standards would be a very good one to specify, and I think the standards may even be there, we just don't know about them yet.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Um hmm.

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

Well I can see some good divisions forming, someone has to write them down, I guess – or –

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

So Clem, how do you see the divisions? Well, I'm not positive where the boundaries are, I just – in terms of the outcome, it would be good that this would initiate the ability to get reports and images, and/or, and they made a choice, back to offices that order them or back to EMRs that order them from some other outside radiology source. That's – I mean, they're just – they're not getting anything right now by the standards, there is no standard to send either the reports or the images that's required by ONC and its – I looked at the dollar amount, it's twice the lab cost in Medicare Part B, the cost of radiology alone. And that's excluding endoscopies and pathology images and ophthalmologic pictures and other things, which typically go lighter weight when the exchange is made, and actually typically as a PDF or something equivalent. So I just eager to see that we unleash this content and give the docs more than what they're getting now from the standards, so they'll be happy with them.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay, so I think that's very much in line with sort of going back to the top of the call where we said that radiology to physician office was – had to be the first priority for image sharing, in order to enable others, but I think this is a slightly different formulation. So this is saying reports and images to the ordering EMR and I would add, as well as to other EMRs, so it could be a CC, referring, consulting or other EMRs.

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

That's a hundred – that's perfect to my ears.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

And then I think that we do have a different use case, or at least different actors with different requirements for reports and images to patients for their own use.

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

Right, and again, it's sort of interesting is the first use case would get a package to an application.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Um hmm.

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

It is conceivable that a consumer-facing application could use standards one, use case one or not, as you say; sort of use case 2 would be the oh, it's the standard should include the unpacking, transformation and consumer digestibility. And so I could imagine, Jamie, us getting a hearing together, testimony on our next call from the group of folks that talked about MINT and a suite of standards that were similarly web-friendly and Internet-oriented that would –

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Um hmm.

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

– help get from an image producer to an image orderer, like a radiology center to EHR, hospital to EHR, etcetera.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Um hmm.

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

That really sings a pretty song in my ear.

**C. Martin Harris, MD, MBA – Chief Information Officer - Cleveland Clinic Foundation**

So John, I think I'm with you except for the standalone PHR. So I thought that what you were saying was, it's a single standard to move from the application where the image was actually acquired, return it to the system that ordered it. But you could, at the same time, have an expectation from a PHR that that information was not going to go through the ordering system, but go directly to this. And what I would agree with is that that should be the same standard back to the PHR and then it's their responsibility to convert it into something digestible.

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

Exactly.

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

Yeah, and in fact if you think of the PHR as another copy to, then the only challenge is how do you inform the system where the patient wants it to go, because the ordering physician may not know. And it's going to apply to other things that come out of a visit, the CDA, for example. So, I think there's sort of a side twist that you might want to give the patient upon check-in the option to say, send it to this direct connect address or something like that, whatever that is. It might be a doctor that the ordering physician didn't know about, it might be his mother, and it might be his PHR. I mean, it wouldn't be his mother, his mother's – anyway, I'm getting off track.

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

But yes, so Martin I completely concur that the set of use cases seems to boil down to the producer of the image can transport the binary content to the orderer or to an application, like a PHR. But that it is just delivering the binary, it is not in that first use case attempting to unpack the binary or display it in a consumer-friendly fashion that would be up to the application provider, the PHR provider. It would be a different use case and there may be –

**C. Martin Harris, MD, MBA – Chief Information Officer - Cleveland Clinic Foundation**

Yes.

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

– again, a valid use case in that regard that we should talk about, but it's not the first one.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Right.

**C. Martin Harris, MD, MBA – Chief Information Officer - Cleveland Clinic Foundation**

Yeah.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

John, I don't think we should do that because that would be very sensible.

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

Let's not break any records, huh. Well there's one other twist on that and that is, whether the ordering provider could have an option to say something about what's delivered back.

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

And so Jamie, we were told that there's this set of DICOM RESTful services called WADO, W-A-D-O-RS that I would like to learn more about. Because between MINT and WADO, it might very well be that both routing as Clem said, selectivity about what gets routed and copied to and all this is handled in a RESTful fashion, that could empower all these various applications to then offer unique functionality to whether it is providers, hospitals, patients, whoever.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Um hmm.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

That's a great idea. Is there someone who could provide that stuff that we could review?

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

And the person who emailed us, and maybe, you tell me if Dave Clooney, who has been emailing us, and Clem you are copied on that, might be a – to describe MINT and WADO and other related standards.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Well then one of us should distribute it back to Jamie so he could distribute it.

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

I just did.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Oh, thank you.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic**

And the reas – I mean the thing about the selectivity, DICOM can deliver a JPEG image already, it's part of its package. And it's built into its fibers, and that may be something that – or the level of compression might be another thing that the ordering provider might want to ask or request and so it would be wonderful if those selections were already available in that construct.

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

So Jamie, I mean, take a look at the email I just sent you, but it seems like the constrained use case with reduced scope we've just done, followed by testimony on these emerging set of standards might very well be our next path forward.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Yeah. And so we should certainly hear about that, no question about that.

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

I think we earned our living.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Well, now, I know John that you've had some additional input from Farzad on the scope of what he wanted us to consider and it didn't necessarily include just radiological images, but included perhaps some time series data or other things. And then I also wanted to ask if the scope of consumer involvement and consumer receipt of or use of images had been part of that discussion.

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

And so, what he was just most interested in, he thought of an EKG as a binary BLOB, just as a DICOM image is a binary BLOB, and so his sort of general scope was, get the transport from enterprise-to-enterprise, application of application of binary BLOBs will you. And so, gee –

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

That's a good point, but – EKGs are not always binary BLOBs and in fact, the industry, I think there are three big vendors, all have a way to send pretty decent EKGs, both the image through – with many options, as well as some of the structured data in HL7 version 2. We were doing it since like 1992 in Indianapolis. And they're very dominant so I think some discussion with them would be in order, about how to do it, rather than – and one of the options is send as a PDF along – embedded in an HL7 message. PDFs are – I guess maybe they're not totally standard, but they're really sort of universally available for lots of stuff that's mixed.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

I think – have a fair degree of formal structure, as it turns out.

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

No they do, they do, but what I was saying is that they're often not loved in standards organization discussions.

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

And so what I wonder Jamie is if we hear about MINT and WADO and all the rest, those may very well be appropriate for binaries of an arbitrary nature, be it a JPEG, a PDF. Or as we've just heard from Chris, maybe it's the time series that could be represented either through the European STP format or other proprietary format for EKGs.

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

Well there's a – I don't know if that's the European one, there's an FDA standard for submitting EKG tracing, but it's more – it's not really the 12-lead EKG that I think we're mostly thinking about.

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

And I had not heard in the request that there was a desire to have what I'll call semantic interoperability of waveforms. It was more the, I would love to be able to, as a patient, show my EKG to an emergency physician, so they know that that ST depression is new.

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

No, no, I agree a 100% John. But there is – EKGs come with two pieces. One of them is, independent of the image, and generated by the machines, which gives you measurements like the ST elevation – and PR intervals and Q – that kind of stuff. It's probably 10 or 12 measurements, maybe less, and then the impressions come out of it, too, as a discrete thing, but not necessarily coded in a universal form. And then also there's the image – the image of the tracing. And if I had to pick among them, the first thing I'd ask for would be image of the tracing.

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

Right. And so typically, of course, whenever I have said, oh, an EKG is a JPEG or a GIF people say, oh, no, no, no, it's data.

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

Well I will – it should not be a JPEG or a GIF, they do not represent the curves well.

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

Right.

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

A PDF is actually – where they do the PDFs, they're actually vector drawings and you can expand them infinitely.

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

Right.

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

You've got to expand those other kinds of things, they don't expand. You can't look at them –

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

Just so you know, at Beth Israel Deaconess, we distribute all of our EKGs in the enterprise to all of our patients via PDF on the PHR. So you're correct –

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

That I think is a very common reality. Is it also Vector Graphics?

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

It is, yeah. We actually use HPLC or some such thing to actually render it, from a vector standpoint, into PDF.

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

Yeah, yeah. Well many of the vendors generate them that way, too.

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

So sure, Jamie, I think it's a fair game to say, lets expand the use case to include not only the traditional DICOM payload, but also something like a PDF, because that would answer Farzad's scope question.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay. Well, I – so I like that and so my remaining question that I want to get back to is, to try to clarify in terms of use case scope, regardless of whether we're just talking about diagnostic images or reports and images, or generalized BLOBs. What is the scope that we want to consider for consumer use of images, or BLOBs as opposed to what I'll call professional setting use of the digital artifacts. And the reason why I keep coming back to that is that it may put more of an onus on the sending system if we expect certain behaviors at the consuming end – at the consumer end.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Well, not knowing those other standards, it sounds an awful lot like it's just redirecting the stream to the right place, except there may be some issues, I don't think consumers are going to want to a 10 megabit chest x-ray image or 20 megabit chest x-ray image when they could get a megabit one that's pretty darn good. So it's a matter of whether –

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

Right so maybe as an example, I had a vendor the other day take a DICOM image of one of my x-rays ingest it and render it through deep zoom, a sort of web-friendly, Microsoft approach that allows you to look at an image and then drill down on detail if you wish. And so – but, I don't know that we would want to specify a standard, thou shalt must use deep zoom more –

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine Yeah.**

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

– that we will deliver the payload to you and then it is up to you to provide the viewer or the transform. I mean, unless –

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

It sounds like the simplest approach.

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

I worry that if we try to get to the specificity of consumer viewing and transforms, there are so many possibilities. And the technology is moving so fast, that may be one of those standards that you let the market decide.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Yeah.

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

Because, you know what's great is that consumer-mediated use case actually necessitates consumer access to the 10 or 20 megabit DICOM BLOB. So in effect, what you could say is, we'll deliver it to the portal, the PHR, the iPhone app, the third party, whatever, and it can then choose to route it, it can choose to transform it, and it can do many things. We've got it to it in a known standard form.

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

Well the only – I think that's – you're absolutely right. The only caveat I place on that is DICOM is more than one form, and I think you'd like to have some, maybe it's the option on the sender that they're going to send it in a smaller size than the absolute largest size. I mean – the words about so-called lossless, there's very little perceivable difference between totally lossless and 10:1 compression if it's done well, if you say a high quality compression level. And so that the difference in transport though is really a lot, you're taking a lot more bandwidth and it's taking a lot longer to get there –

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Well let's not equate lossless compression or – you can have a compressed signal that is lossless, so just because it's lossless doesn't mean it's uncompressed.

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

I'm sorry, I didn't mean to do that, but about the maximum it gets is 2.5 with that, you're right. But we could leave that aside. I think you start out being able to send the whole darn – whatever the thing was the place wanted to send, they still might choose to send something a little less burdensome, that we'd be pretty far along, through DICOM or one of these newer things that DICOM is wrangling.

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

Right, so Jamie, to the discussion that we've had, is it that we deliver the 10-20 megabit BLOB to the application and the application then says, consumer, you can take the 20 megabits BLOB or here's a 1 meg variation if you'd like. Or is it that somehow we work on the standards side that makes the sender responsible for sending the reduced size object.

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

We've – I've just been working with, or last year, with a computer radiography machine, you take the x-ray and it comes in a machine, it only – this is a GE machine, and its default state only emits JPEGs. So, just – and its DICOM, it's full DICOM. So it's kind of in the bud.

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

So I guess Jamie, from a scope perspective, do we want to make a statement on what the server does versus what the receiver does?

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

No, I don't think so. I mean, well, I mean not in a standards recommendation, but in terms of clarifying the use case, I think that could be useful.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Well I think before we got into these distinct –

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

And I don't know enough about these new generation standards to know if they have some flexibility of saying, send it to me server in this way. I'm just not sure. But if we've clarified on the call it's enterprise-to-enterprise application to application, it's not getting into the details of vendor neutral viewing at the moment, and that we hear more about MINT and WADO and then can clarify even further the scope, once we know some of the capabilities of those standards, I think we have a pass.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Yeah, I agree completely.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

I think we do too and I almost regret bringing up the distinction about compression because prior to that, I think it'll be good no matter what, if we could get it all being sent back to a variety of folks related to the orderer, could be the patient themselves or could be the orderer's copy to's.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay. Well I think – I do think that this is a path forward, we've certainly gotten some clarification and some new ideas on the scope. I think we're really talking about a few different scenarios on one use case rather than a variety of different use cases and I do think also, as John said, that our next step would be to gather additional testimony on some of the other alternative standards that we might consider.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Let's do it.

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

Sounds good.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Yeah. So I think then for our next meeting, I think John, it looks like we would want to hear from David Clooney or another representative who might be familiar with WADO and MINT, but I don't know who else we want to hear from.

**Farrah Darbouze, MPH – Program Analyst – Office of the National Coordinator**

Hi, this is Farrah from ONC. There was also a request from RSNA to present their kind of point view on image sharing again. That request came in to Doug and he asked me to – for this committee to consider it again.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Is Clooney DICOM or RSNA?

**Farrah Darbouze, MPH – Program Analyst – Office of the National Coordinator for Health Information Technology**

Excuse me?

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Well Clooney is either from RSNA or DICOM, I don't remember.

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

So as I understand it, he is both a leader of some IHE activities and close to RSNA and is one of the authors of DICOM.

**Farrah Darbouze, MPH – Program Analyst – Office of the National Coordinator for Health Information Technology**

Hmm.

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

But RSNA, yeah certainly happy to hear from them.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Yeah, I think we'd be hap – so whoever it was the reached out to Doug, I think we'd be happy to hear from them and we'd also want to hear from David.

**Farrah Darbouze, MPH – Program Analyst – Office of the National Coordinator for Health Information Technology**

Okay, so I will contact them –

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

And I don't know if that is one person or not, between those two requests.

**Farrah Darbouze, MPH – Program Analyst – Office of the National Coordinator for Health Information Technology**

Yeah, the request came in from Belinda Seto from NIBIB.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay. All right.

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

Well that's NIH, so I think we ought to double check whether Clooney's not an official representative of RSNA and see if that would serve the needs of the requester.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

I mean I think there may be different, just like there could be different workgroups with different perspectives, I'd be happy to hear – from my perspective I'd be happy to hear from everybody.

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

Okay. Well the other thing is I think, John, have you looked at the MINT or WADO at all? I mean, is it easy to – is it readable.

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

I have not, that's why I am eager to learn more and sounds like we will do that at our next call.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Yeah. So, I think what we should do then is to get back to I guess Belinda and David and invite them both to present on our next call.

**Farrah Darbouze, MPH – Program Analyst – Office of the National Coordinator for Health Information Technology**

Okay, great.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

When is that next call, by the way? I'm looking for it on my calendar –

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

It's next week or the week after.

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

August 29.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay. Yup, yeah.

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

What time is it on August 29, do you know? Is it 1 o'clock?

**Farrah Darbouze, MPH – Program Analyst – Office of the National Coordinator for Health Information Technology**

Eleven –

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

It's 11 Eastern.

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

Hmm, 11 Eastern, I think I will be in Salt Lake City and I may be challenged, but I – that means it's 9 o'clock Salt Lake City time –

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Well maybe you can get Stan on the call.

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

Well he's leading the meeting that would be worse for him –

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

All right.

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

But maybe I could.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

All right. So I think this has been a very rambling but productive call, and I'm really pleased with where we've ended up in the discussion at this point. Are there other points that folks want to make at this time? So hearing none, I think Mary Jo, we're ready to see if there are any public comments.

## **Public Comment**

**Mary Jo Deering, PhD – Senior Policy Advisor, Office of Policy and Planning – Office of the National Coordinator**

Thank you very much Jamie. Operator, would you check to see if there are any public comments.

**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 comments at this time.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Okay. Well then, I think we're adjourned.

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

Great. Thanks so much everybody.

**Jamie Ferguson – Vice President, Health Information Technology Strategy and Planning/Fellow – Kaiser Permanente, Institute for Health Policy**

Thank you.

**Christopher Chute, MD, MPH, DrPH, FACMI – Professor – Mayo Clinic College of Medicine**

Thank you.

**C. Martin Harris, MD, MBA – Chief Information Officer - Cleveland Clinic Foundation**

Thank you. Bye.