

**HIT Standards Committee
Clinical Operations Workgroup
Transcript
November 15, 2013**

Presentation

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

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

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

Present.

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

Donald Bechtel? Chris Chute? Jeremy Delinsky? Floyd Eisenberg? Martin Harris? Stan Huff? Kevin Hutchinson? Liz Johnson? John Klimek? Becky Kush? Kim Nolen? Marjorie Rallins?

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

(Indiscernible)

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

Wes Rishel? Hi Marjorie.

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

Hi.

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

Cris Ross? Joyce Sensmeier? Dan Vreeman? Kevin Brady? Jay Crowley? Clem McDonald? Nancy Orvis? Terrie Reed? Karen Trudel? And I believe Farrah Darbouze is on from ONC and with that, I'll turn it back to you John.

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

Very good and thanks folks for joining us today. And as we know, we've been charged by the Standards Committee with creating a recommendation for a variety of use cases for image sharing, both what I'll call traditional radiology images and non-images like EKGs that are binary blobs, in this case a time series. We've had a lot of testimony from standards development organizations and from vendors. We did a very successful implementation in Scotland of image sharing and so we're privileged today to hear as to how Scotland has approached the architecture, the products and the standards for a nationwide information sharing network of PACS images across the country. So let me go ahead and turn it back to you Michelle and if you could just introduce our speaker, and then we will hear from our friends in Scotland.

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

Yes. So we have Alan Fleming, and Alan, I'll let you introduce yourself and give a background of where you come from. And he has a short battery life, so we're going to let him just get started.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

My name is Alan Fleming. My job is to program manage the PACS service across Scotland. Today I hope that I can describe the main elements of how we succeeded in delivering what's being delivered. I'll describe what's on the ground and take questions at the end, after – some challenges with you. There were slides circulated, I don't recall circulating them to the – list of names – Michelle.

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

But, we have those slides; she had sent them, so go ahead.

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

Yes.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Okay, I'll go ahead then. Right. And let me go straight to slide three to give you some context, forgive me if these are things you already know about Scotland. We have a population of five million, a health budget of about 14 billion with a relatively small health – eHealth expenditure of 200 million. We have 146,000 staff, around 47,000 nurses, around 4,000 consultants and 12,000 primary care doctors the general practitioners. This information system – I'm moving to the next slide now, slide four.

The information system is supplied by one imaging vendor and is live in 38 radiology departments – reaches out to 15 satellite departments, for example, on islands and so on. All the images that we take are available to all authorized clinicians. We have now collected around 18 million studies starting in 2007. That's a bold decision to open up access to that level, however, it is governed by clinically agreed information governance frameworks and achieving that is a significant feat across organizations. All clinicians have the same front-end, if you like and access to the same features and functionality, whether they're there in rural areas, Highlands and Islands or city centers. A great benefit of that is our training overhead is fairly small. Once training in Glasgow and sent to work in Stornoway, there are no retraining issues. Moving on to slide five.

I have a list here of some of our key dependencies that we had to address in order to make that nationwide access possible. First of all, we have our community health index, which is our unique patient identifier. That's an absolute prerequisite of any information sharing across any of our systems in Scotland, but certainly wouldn't have – had we not had that that would have precluded the delivery of this system. Other notable infrastructures include the need for a robust wide area network and we certainly have. Other key dependencies are the examination coding structures, which were, to be honest; we still struggle with to ensure coding is coherent and doable across all our sites. In the early days, one final dependency here might be, in the early days I think it's fair to say DICOM compliance was an issue. From today – at this point, that's much, much less of an issue.

So moving on to slide six. There's some repetition here, however, I just want to give a sense of scale. We have 24,000 registered users, we have 350 diagnostic work stations, mainly used by our radiologists and the footprint is over 2000 wards across the country on like 20,000 clinical browsers. Moving quickly on, our tools and architecture is, in short hub and spoke. There are local applications installed with local storage. Local storage is not unlimited; it's a finite 12 months' worth of local data, which then feeds to mirrored data centers. The mirrored data center is where the information sharing takes place.

Moving on to the next slide. I just want to drop some examples of some of the policy challenges that we have and how we've risen to meet those. So first a picture, two examples whereas this information sharing has assisted the policy level, I would say that our key assessment for neurological transfers has been changed dramatically. Pre-2007 an automatic transfer was always considered, now stroke patients are pre-assessed by looking at their CT before any decision to move – another example includes cross-site capacity reporting. Whilst we haven't got all the answers there, we are able to give second opinions in one area of the country where that's needed.

Moving on to slide nine, entitled benefits. I'm giving you some numbers there to support some of the examples that I've just given. Our urgent transfers to – for example or neurosurgery, probably well over a hundred a year now, I mean this slide was written some time ago. So those transfers are assisted by being able to see another site's image. Second opinions are in excess of 10,000 per annum and they also operate through multidisciplinary team meetings, MDTs we call them. We have a national waiting list hospital, which treats electively 45,000 cases per year and that hospital does not take any images, they're transferred in from the originating and referring sites.

If I can move on to the next slide, which again has a map on it, let me just describe the patient journey of Miss D, to give an example of the level of information sharing. So is everyone – it's the one again with the map of Scotland and its headed Benefits and Miss D. This is a real-life case. The patient was in Stornoway, which is in the Western Isles, the top west of the map. It involved a chest physician in Inverness, which is round about the top middle, want to see geography of Scotland is good and – a radiological opinion in Borders, which is down at the bottom, near England. And the patient eventually received successful treatment in ITU in Glasgow.

And the next slide has a fair amount of clicking involved, but it describes Miss D's patient journey. Age 18, progressive shortness of breath, chest pain and so on and so on. Her CT was sent, first of all to Inverness for a chest opinion. That scan was then reviewed in Borders by another radiology with a decision to transfer to Glasgow. On our next slide Miss D is then transferred to Glasgow, occupies and ITU bed in Glasgow Royal, receives the described treatment there and recovers. Without that flow of imaging and opinion giving, that wouldn't have happened before.

On coming to a close now, just to describe what other benefits we've been able to calculate in the slide entitled, Further Benefits. Our conservative estimations of further benefits includes a probably around about a 10% reduction in re-examination, that – these are figures you can apply to any PACS installation; however, it was 1 in 10 of our exams would go missing when it was paper and film resulting in re-examination. We've reduced time to treatment. We have been able to absorb a mushrooming in activity with the existing radiology establishment and we've also been able to absorb and exponential data growth. Anecdotes suggest we've reduced the litigation significantly. Other benefits include we are now able to monitor CT dose across the country by extracting that data from our national archive.

Just to finish, can I outline some challenges. Everyone is experiencing explosion in data production and our new batch of 128-slice CT will no doubt add to that. We have consistent cost pressures from that direction on data storage. Our response to that is to reach for compression and lifecycle management, which we're now implementing. I think the final points to make in terms of how did we get a reasonably successful information system here is, on the penultimate slide entitled Lessons. I'm seeing that we had excellent corporate commitment and support from our Scottish government colleagues and really strong clinical support across all 350 of our radiologists with good support from the health community, too. Finally, I think one of the keys to this cross-organizational working is choosing and working with good governance models. I'm finished now; I hope that's not been too rushed. I'm happy to take questions.

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

Great. Well thanks so much. And so as we in the United States reflect on our quite heterogeneous environment, with 330 million people, dozens of PACS vendors, it is sometimes unlikely that the United States will create centralized singular instances of anything.

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

And so the question, of course, as a Standards Committee that we ask is, well given that the world is going to be heterogeneous and there are going to be local data stores and cloud data stores and multiple vendors and all the rest, our challenge is to say, well what is the parsimonious number of standards that we need? DICOM is, in many ways, fabulous for representing content. But I gather, from what you've done, is you actually created a sort of centralized repository model with using a dedicated network to shift these DICOM objects from place to place. And I – the question, of course, is for transport, have you used purely just what is native to DICOM or have you implemented other alternatives to just the sort of basic communication TCP/IP portions of DICOM?

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

No, our – believe it or not, our wide area network isn't dedicated to this, it's – I mean the name implies that it supports all our other applications. It is TCP/IP, there's nothing special about it. We are transporting pure DICOM, as they transit over our network, they are encrypted and as they leave a local site, they're encrypted. Our wide area network, I think the view is, the network becomes, over a certain size, it becomes – itself becomes untrusted, so that's the reason for encrypting our messages. But beyond what I've just said, there's nothing too fancy about what we do. We isolate PACS traffic using quality of service mechanisms, we don't do that universally because they're not universally available, but the message content and the physical infrastructure are not, they're not specialized in any way.

(Indiscernible)

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

Of course, we think of the United States – oh, I'm sorry, there was another comment or question?

M

Well, just whether you use a VPN – is it VPN doing the encryption?

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Ah, yeah, yes it is, it's from – we – each of our 38 sites has basically a – what's called a DICOM access point and that DICOM access point is technically a node of the National Archive, and that does the VPN stuff. It's also race compr – not race – I'm looking for the right word for compression model, it'll come to me in a second, but again, that's an industry standard compression model. So as it transits through – from the local site to the National Archive, it's handled by that device on the way out.

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

If we think of things like emerging standards, RESTful standards using the public Internet as a way to take a DICOM object and send it from place to place, whether that's one institution to another institution or a repository model like you've described. And DICOM itself works actually quite well over a wide area network, but sometimes regular old DICOM doesn't work so well through multiple firewalls, across multiple organizations over a place like the public Internet, and so that's one of our challenges.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Yes, absolutely. I'm not sure we would ever consider transiting our data over the public Internet. The wide area network we have in Scotland is NHS only, so that to an extent, that helps. I take your point about firewall management that is almost a daily issue and can be subject to the vagaries of devices that are outside of our control. However, we know what the issues are and we address them when they arise.

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

Now also as we think of our use cases, we have such things as provider-to-provider transmissions. We also have a use case like provider-to-patient transmission. And I'm curious if you have things like, well, we're going to keep an uncompressed lossless image over here in the cloud. But then if it's requested, depending on the nature of the request, we can provide that in a JPEG format as a low image quality or a high image quality lossy compression or – have you multiple qualities of image delivery based on who you're delivering it to or their application for it?

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Let me break that up into two, and first of all ask if my Scottish government colleague has managed to join us, Eddie Turnbull? No, obviously not, and I'm asking for Eddie's input –

M

Andy – here as well, if I can help you.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Hi Andy. I'm going to answer this in two parts, because I know the Health Strategy has a citizen dimension at the moment, so maybe we can come back to that in a second. But, in terms of who we provide DICOM data to, basically we provide that to each other and its starts off life only as 2:1 lossless, as in – lifecycle journey, depending on which modality it came from, it then becomes – it, will then become lossy. The standards we use for this, since this is a standards committee, our lifecycle standards are derived almost wholly from our Royal College of Radiologists recommendations, and these are easily findable on the web as regards compression.

M

Could you elaborate on what the lossy version, is that JPEG or JPEG 2000?

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Well, our basic standard is 2:1 lossless for everything. As we move out of that into lossy, our CTs go to a maximum of 10:1, our mammo go to a maximum of from memory of 20:1, our CR, you probably know that as DR, goes to a maximum of 50:1, which is quite contentious ratio. Those standards, as I say, are the work – we follow them and they've been written up by our Royal College of Radiologists in the UK.

M

Okay, thank you.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Andy, do you want to answer the question about the citizen dimension, if we might in the future deliver JPEGs to patients?

Andy Robinson – Scottish Government

Yeah, don't know of any use cases currently where we are delivering these types of images direct to patients at this time. So, not a use case we work with just now and not really one we've been too focused on in looking at where we're really starting with patient engagement. It's been more of an administrative – than – and most patient use cases have been looking at images – diagnostics.

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

Just kind of dialing in, I got kicked off a couple of times in the early part of your presentation, so you might have said this, but there are two questions. Do you carry all the images for of Scotland or just the CT/MRs? And the second question is do you push images to physicians who ordered them?

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Question one, yes, we receive and produce within the information system all the imaging in the country. The only imaging that we exclude at the moment is specialist cardiology imaging, like ultrasound and so on, but mainstream ultrasound we keep. Sorry, what was the second question again?

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

Do you routinely push images and reports to the physicians who order them or do they have to pull them?

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

We push by way of pre – and overlying pre-search. So if there's a planned radiology only clinic tomorrow morning, all the planned patients will have their priors drawing down through the local database.

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

Well I was actually asking, but what does the primary care physician who ordered a chest x-ray, what is – do they get anything or can they automatically, because they ordered it, they'd like to know something.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

If I understand your workflow push properly, if they – it's pushed to them for reporting or for diagnosis by the RIS, but main thing that we have to go into it, we have to go and look for it.

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

Okay.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

I mean we are working on XDI and XDS for document delivery across boundaries, that's one of the next things we're having a look at, but in terms of pushing isn't that sophisticated in the system, however, there's a lot of tooling. A final example to give you is we use a Bureau to trans – to push images to tertiary referrals in England, where obviously this information system scopes at the border. So if we need to transfer a child's images to Great Ormond Street, then we – its quite easy to push them there, but it goes over a different – it goes to a different system.

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

Okay. Thank you.

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

So, other questions from the group, I mean I think we've heard some important information about how DICOM has been used, potential future use of XDS or XDI, issues of firewall management, issues of lossy and lossy compression. There is a patient component or citizen component envisioned. Key point was having a master patient index community identifier idea as to how do we actually know who the patient is and if there are studies, how do we initiate query response based on identity management. And as you might know, the United States has no National Healthcare Identifier and is unlikely to have a National Healthcare Identifier, so at the moment we are left with probabilistic statistical matching of name, gender, date of birth and other demographic indicators, which I imagine Scotland would be an impediment to your success.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Well, we often use probabilistic matching for other data sets and some of the demographic – without going into too much detail John, there are – we can have complications with our demographics. It's great to have a unique – number or UPI. Where things get complicated is we have 15 RISs and each of those RIS systems generate its own ascension numbers, you know how it works, so sometimes we have to review our data using probabilistic matches and US has more experience in that than we have, but it's not something we don't have to reach for occasionally.

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

(Indiscernible)

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

Life is hard everywhere then, huh?

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Yeah, of course.

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

Well and Clem, you're a McDonald, you might –

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

Yes I am.

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

– imagine there are a few of those.

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

Yeah, well I was in Scotland a couple of years ago and every time I came into a hotel or something, they say, oh, you're a McDonald are you. So, I felt very at home.

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

Well good. And so to the extent that the folks on the project in Scotland have any DICOM implementation guide, anything that you have developed to make sure conformance –

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Uh huh.

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

– certainly I would love to see those sorts of things, because one of the things we've discovered as a Standards Committee is a standard is great, but everybody interprets it differently. And so you have to reduce optionality and you have to be quite specific about for a given field, what is required, optional, what are the value sets one uses in a field. And so we, I think, as a Standards Committee have been as specific as we can be as we create regulation mandating the use of standards as our Meaningful Use Program has a certification and conformance testing portion of it.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Sure. I think my only comment there would be, one thing, I agree with what you're saying, but we're also doing some anonymization work in DICOM, which is extremely challenging. And I think one of the challenges for any standards committee would be to ensure that there's, as best as possible, is to ensure that suppliers are completely open about the use of private tags in DICOM. I think, and I hope that's making sense, those comments are coming out of our experience in how difficult it is to anonymize images and their metadata.

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

Have you published anything about the anonymization?

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Did we publish anything?

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

Yeah.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Not in any peer-reviewed read, but we certainly have analyzed the application options and laid out what we think the issues are, basically this watches – its obvious where it's coming from, and its requests for research data and there are only a limited number of tools we think are available to achieve proper anonymization.

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

Well I think personally it would be very interesting to me if there were any white papers or reports you could share, even if they weren't –

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Yeah, I can do that, I can do that.

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

– that, yeah, if we're – those issues and a lot of people are interested in that.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

Yup. Well again, back to the comment about standards, if we could get – if we could have standardized the use of private tags, then that would be useful, I don't know if that is coming across as an oxymoron, but almost by definition, they are proprietary. But they do create significant issues.

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

Yeah, I can imagine.

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

Very good. Well, any other comments or questions?

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

Well John, again I was cut off a bunch of times at the beginning because I think my cell phone isn't behaving well. What's the rest of the agenda?

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

And so this was the agenda item we had today. There were a limited number of folks who could join us today, Jamie is travelling, etcetera and so we were going to reflect a bit on some of the tasks we have been assigned, but I think given the small number of people, this was our agenda item. And Michelle, anything else that you had on the agenda?

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

This is it, I think just for the group to be prepared on the next call to follow up from all the presentations that have been heard and really start to think about putting together recommendations for the Committee that can be presented in December.

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

Okay.

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

Well I wonder if I could just bring up a thread that's related, but it's not directly this. And I think this is all good and we should proceed with it, but I worry – if I could, just – I'm sorry.

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

I think it was just an echo, actually.

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

Oh, okay. But I worry a lot that we're now four or five years into meaningful use and there is no systematic activity to get radiology text reports to physicians who order them. And they're doing that in regular hospitals all over the place. I'd like to urge that we would have a second thread of just the standard old HL7 message be tuned up. And using whatever to deliver radiology images and perhaps other images as encapsulated data so they could actually use the railroads that many of them have now as well as the DICOM for the full images that people will want, too. But this is so important to internal medicine and primary care and we're not even talking about it, expect in terms of the full DICOM.

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

Right. And I think, what you'll see is Jamie has begun to outline three use cases and three sets of standard stacks that we would use to report back to the Standards Committee, in December, that would include the – not only, low res high res use cases of images and objects, but also the accompanying text reports.

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

Well, that's still – I was just at a talk this morning at a pre-AMIA meeting and that everybody's sending HL7 version 2 messages all over the country, but they're not part of any standard, I mean they – well, except for the labs. And they have mechanisms, hospitals have them, they have interchange engines and stuff and I – is that – has he drafted that and sent it around where I could comment on it?

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

Not yet. We've just literally, as Michelle had said, we are preparing for a December presentation, so he's created a very rough outline, and so he's travelling today, as I mentioned. But I think our next call, Michelle; we'll focus on looking at three use cases, three standard stacks and refining that together as a group so we get ready for our December initial presentation to the full committee.

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

Okay. And when's that next call?

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

Michelle, do you have that date?

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

I'm checking. Caitlin, if you get to it first, if you could shout it out. I believe its Friday, December 6.

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

Good.

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

Okay. And at the same time?

Ashley Griffin – Management Assistant – Altarum Institute

11 a.m., yes.

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

Okay.

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

We will be prepared. Well, I certainly want to thank our colleagues in Scotland. I have certainly enjoyed visiting Scotland and the Lochavullin is highly recommended. And I did climb Ben Nevis when I was there last, the winds were at 70 miles an hour, it was snowing and bitterly cold and my Scottish colleague said, it's a wonderful day.

Alan Fleming – PACS Project Manager – NHS, National Services Scotland

And I know it was in the middle of July, wasn't it?

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

It was. So Michelle, unless there is other business, I think we will take this testimony, circulate it, ensure that the group has an opportunity on December 6 to incorporate it into our final recommendations. And we will also, at that time, reflect on our last Standards Committee meeting, the work we've been assigned and some of the work ahead.

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

So I think with that John, we'll open for public comment?

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

We will open it for public comment.

Ashley Griffin – Management Assistant – Altarum Institute

If you are on the phon –

Public Comment

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

Operator, can you please – sorry.

Ashley Griffin – Management Assistant – Altarum Institute

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

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

Well very good. I certainly again thank everybody for joining the call today and thank you Michelle, but I think if there are no other administrative items, our meeting is adjourned and we will reconvene on December 6.

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

Thank you.

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

Thank you all.