

**HIT Policy Committee
Certification/Adoption Workgroup
Health IT Workforce Development Subgroup
Transcript
February 19, 2013**

Presentation

MacKenzie Robertson – Office of the National Coordinator

Thank you. Good afternoon everybody, this is MacKenzie Robertson in the Office of the National Coordinator for Health IT. This is a meeting of the HIT Policy Committee's Certification and Adoption's Workgroup's Workforce ... Health IT Workforce Development subgroup. This is a public call and there is time for public comment on the agenda already. The call is also being recorded, so please make sure you identify yourself when speaking. And now for roll call. Scott White? Larry Wolf?

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks Larry. Patricia Dombrowski?

Patricia Dombrowski – Bellevue College – Director, Life Science Informatics Center

Present.

MacKenzie Robertson – Office of the National Coordinator

Thanks. Michelle Dougherty?

Michelle L. Dougherty, RHIA – AHIMA Foundation – Director of Research and Development

Present.

MacKenzie Robertson – Office of the National Coordinator

Thanks Michelle. Don Gull? Samantha Halpert?

Samantha Burch Halpert – Federation of American Hospitals – Vice President, Quality & Health Information Technology

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks Samantha. Bill Hersh?

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks Bill. Joe Heyman?

Joe Heyman, MD – Whittier IPA

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks Joe. Deborah King?

Deborah King – 1199 SEIU Training & Upgrading Fund – Executive Director

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks Deborah. Norma Morganti?

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks Norma. Gretchen Tegethoff? Steve Waldren?

Steven Waldren, MD, MS – American Academy of Family Physicians

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks Steve. Michelle Fox? Ed Salsberg? Stuart Werner? And any ONC staff members on the line if you could please identify yourself.

Chitra Mohla – Office of the National Coordinator

This is Chitra Mohla.

MacKenzie Robertson – Office of the National Coordinator

Thanks Chitra.

Cinyon Reed – Office of the National Coordinator

This is Cinyon Reed.

MacKenzie Robertson – Office of the National Coordinator

Thanks Cinyon. And with that, I'll turn it to you Larry.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Okay. Well, I want to thank everybody for joining us again today. I hear that several of us have a 1 o'clock cut-off so we'll stay on track for getting the important things done early. A lot of good feedback on the comments, in the comments for our proposed recommendations and so my thought was, to organize our time, that we would quickly touch on some of the key points of our charge. And then quickly look at the seven recommendations that are in the document, there were six plus one got added in terms of standard occupational codes. And then, before we got into the details, maybe talk about what's missing. I know that a couple of commenters responded that maybe our foc ... as broad as we were trying to be, maybe we were missing some important things, or maybe there was some other important thing we should highlight that maybe weren't properly highlighted in what we have so far. And once we get a shot at what's missing, to then walk through the recommendations and see if they need to be further tuned before we bring them to the Certification and Adoption Workgroup. So does that sound okay with folks?

Joe Heyman, MD – Whittier IPA

Larry, this is Joe. Just a quick question about the document itself.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Um hmm.

Joe Heyman, MD – Whittier IPA

It's stamped draft, which implies that there will be a final document. Is this actually a draft for a final document or is this just a discussion document?

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Ah. So, in terms of sequence, the sequence is that we're going to be bringing our discussions to the broader workgroup, the Certification and Adoption Workgroup. And so, there will be a discussion with them that would further inform these recommendations and then hopefully, we'll be near to being able to bring something forward to the Policy Committee as a whole.

Joe Heyman, MD – Whittier IPA

But what I'm wondering is, are you going to bring a document forward or are we going to bring recommendations forward, like on a PowerPoint or something like that. In other words, I guess what I'm asking is do we need to worry about the formatting and that kind of stuff?

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So we will need to worry about the formatting, the normal way to present recommendations is that there is both a set of slides that are the discussion points for the committee, and there's a written document as well.

Joe Heyman, MD – Whittier IPA

Okay. All right, no problem.

MacKenzie Robertson – Office of the National Coordinator

So this is MacKenzie, I'll just add onto that. The final – assuming that these are presented to the workgroup and then to the Policy Committee, I would then draft a transmittal letter. So that's the final way the recommendations would go to the National Coordinator. For the purposes of this call, I think it's fine the way it is, you don't have to be worrying about ...

Joe Heyman, MD – Whittier IPA

... whether the bullets are in the right place ...

MacKenzie Robertson – Office of the National Coordinator

Right.

Joe Heyman, MD – Whittier IPA

... and that kind of stuff.

MacKenzie Robertson – Office of the National Coordinator

Um hmm.

Joe Heyman, MD – Whittier IPA

Okay. Sorry.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

No, that's fine Joe. Any other comments or questions about process and what we're trying to accomplish here, here on this call. Okay, well maybe if we could dive into – if you'd open up the WF summary. That's great. So, at the beginning of the document, there is a broad charge, a specific charge and then three sets of workers were identified. So, I thought it would be helpful for us to sort of come back to the beginning and maybe in this abbreviated form, for those of us with short attention spans like mine; it's very easy to get lost in the words and lose the forest. So I thought I'd try to get the forest out there in front of us. So, looking to recommendations to the Policy Committee to improve health IT education to all health care workers, so, a pretty broad charge in that we're looking to tying down this activity within one year, so we're now about half or three-quarters of the way through that calendar on getting training needs and competencies identified and tools and implementation recommended. And so the recommendations that we have here are intended to address that specific charge.

We then identified three sets of workers. So we have the health care workers who are delivering care and those that support them. IT and informatics professionals who lead projects, if you will, these are the people in between the health and IT. And then information system developers, and probably that last group should be broadened to system operations and all of the sort of much more hands on tech stuff, that's less about healthcare and more about technology. Does that look like a reasonable start on scope?

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

Do you want comments on this?

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

I'll take a couple of quick comments, yeah.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

So, this is Bill Hersh. Item number one, I think there's a word missing, and those that and support them.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Ah.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

Maybe just dropping the word “and”...

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Sure.

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

... and then for the third one, I agree that information system developer is a little narrow, maybe something like information systems and technology developers, that might be kind of broad enough to cover almost everyone.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

... developers, systems technology ...

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

I would say information ...

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

... and operations, too, right?

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

... and technology developers...

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

The whole crew. Yeah, so we want to get this as the whole of really the tech side, right.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

Yeah.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Turn on track changes in my copy so I know what I'm doing. Okay. Well, let's dive in to the next slide.

This lists our recommendations and what I want to do here is just name these seven and then just in the way that number seven surfaced after the document started to circulate, that we actually look at what else we think might be missing, and then we could review these in more detail, in terms of tuning them. And I would recommend that we actually do the tuning while working from the document and not this summary.

So the first one is we recommend that ONC takes on a bunch of this work to identify and validate competencies and that those competencies are widely disseminated, and we listed many communities. That we advocate for educational programs, that we review various initiatives that ONC already has; so, they've already sponsored – ONC has already sponsored many things and let's learn from what they've already sponsored. Number five is trying to be a little forward-looking, what do we think is going to be needed in the future and that we bring in a lot of entities to help with that and take on an advocacy role. That we do targeted outreach to folks who would be partners, like trade associations, professional associations to create awareness of what resources are out there and get those resources and best practices out to their members.

Joe Heyman, MD – Whittier IPA

Is that a recommendation to ONC to do the outreach?

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Yes.

Joe Heyman, MD – Whittier IPA

So we might want to put that in there, because it isn't clear who's doing it.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Yeah. Ummm, and my sense is, and maybe we need this in some of our introductory comments, the C in ONC is coordinate and so, it may be that the actual best agency in the federal government to do something is not ONC, but I think we're asking them to step-up and coordinate the activities to get this stuff going. And if it turns out some other agency does the work, we don't care who does the work...

Joe Heyman, MD – Whittier IPA

Right.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

But we as a workgroup are not going to do the work. So I think that was maybe the distinction we were making. And finally, number seven is really almost back to the beginning when we first started this and we were asking for what was already known about the health IT workforce. It turned out that the existing job classifications really don't reflect the jobs that people do that include major health IT components. The closest we got were some of the HIM roles, and those really cover the whole spectrum of HIM activity, that informatics is really not represented at all and that while there are IT jobs that happen in healthcare, that's really as close as we could get for specific linkages. And so since this is a time when the SOC is being reviewed, it seemed like this was a great time to include expanding what's in the standard classifications. So, thoughts, comments, reactions on this as a set and things that you think need to be added to this list, the areas we talked about and never covered or never talked about and should have.

Joe Heyman, MD – Whittier IPA

I think the broad charge for the workgroup is a very broad charge. It's hard to provide health IT education to all health care workers.

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

This is Bill Hersh. I agree. I mean I wonder what it is, especially given the fact of the constraints on budgets of ONC and I suppose other federal agencies, what is it that we can advocate that they do, that they actually can do.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So, you're right, we probably can't spin up some major training initiative, but maybe we can point out some major deficiencies. And I think the intention was some of those with ... six, for example, is to try and leverage other players, actually part of five and six ... the players in this space.

Joe Heyman, MD – Whittier IPA

I'm not sure that we have to add anything there; I just think it's quite a reach to try to get every health care worker to have health IT training or education. But it's – but using their organizations will help.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Well, and we didn't talk about it that much, but clearly a big piece of that comes from on-the-job training.

Joe Heyman, MD – Whittier IPA

Right.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

And, that really is where my organization puts most of its emphasis. Yes, we like to hire people who already have skill sets, but our experience is we always wind up doing a lot of training after they arrive. Whether it's because of specific configurations that we've done with systems that are out there in the world or custom software we've developed or aspects of how we provide care that are unique to us. So, there's always a lot of on-the-job training, there's a long tradition of that in healthcare.

Michelle L. Dougherty, RHIA – AHIMA Foundation – Director of Research and Development

This is Michelle. At the risk of adding something new, I just wanted to add an additional thought for you to either kick around or reject but, one of the things that we're finding in our workforce development is not clearly understood, is what's working and what's not. And I'm wondering if the committee could actually play a significant role in helping to either evaluate or encourage the evaluation of what's actually effective, and then helping to disseminate best practices. So I think you sort of touch on that in number five by reviewing and identifying critical linkages, but sort of going beyond that and actually calling out, whether you want to call it best practices or whether it might be a good thing to sort of talk about evaluating what's actually working.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So beyond just a casual review, number five suggests a high-level review and you're suggesting more of a deeper dive or something else.

Michelle L. Dougherty, RHIA – AHIMA Foundation – Director of Research and Development

Yeah, yeah, exactly. And feel free to overrule me, but it just seems like it's something that a group of this level could actually make some significant progress in saying, especially for say improving the STEM education outlook. We're starting to coalesce around four or five things that are really making a difference, whether it's a research experience early on in the undergraduate years or making a more compelling, engaging experience or the use of information technology and learning technologies; those kinds of broad-based, very credible recommendations that folks like P-CAST and OSTP are starting to advocate. But, we've only started to know that because we're collecting lots of evaluation and then working together in an interagency process, we're starting to get the word out. So again, feel free to overrule me.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Well, I think that that feedback, I think that has sort of been a continuing theme with a lot of the Policy Committee discussions is, let's get feedback from the field on what's actually working. So, I think either ... whether we restructure five or wind up adding something else. I think five was trying to get to the future ...

Michelle L. Dougherty, RHIA – Director of Research and Development, AHIMA Foundation

Yeah, exactly. I hesitate to add something else because you've already got so much there, but I agree. It's not quite five, but it was the closest I could see.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Okay. And it could also fit into four, right.

Michelle L. Dougherty, RHIA – Director of Research and Development, AHIMA Foundation

Absolutely.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Four is asking to identify and review effectiveness of the current initiatives.

Michelle L. Dougherty, RHIA – Director of Research and Development, AHIMA Foundation

Absolutely, yes, you're correct. Yup.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Maybe that's actually the place to put it.

Joe Heyman, MD – Whittier IPA

I would argue that four actually already says that.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So maybe what I'm hearing though is these might not be initiatives driven by ONC. So, for example, let's say that – let's say Joe, you ...

Joe Heyman, MD – Whittier IPA

Oh, I see what you're saying ...

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

... experience of training an NP who works with you ...

Joe Heyman, MD – Whittier IPA

Right.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

... and you got their feedback of, wow, that's terrific, I really can do this now and that got passed on as, this was effective training ...

Joe Heyman, MD – Whittier IPA

Right, you're absolutely right.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

... overblowing one small example, but that's sort of the thing I'm thinking.

Joe Heyman, MD – Whittier IPA

Right.

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

So this is Bill Hersh again, and I'm thinking about how we're truly going to operationalize this. I mean, we're a group that meets once or twice a month for an hour, some of us might have some amount of time, but I mean a lot of these initiatives are so broad. But maybe then should the focus of this group being to sort of identify to ONC and others what needs to be done, not that we're actually going to do it, although some of us actually have the skills to do it, but maybe under a different context. I just – it doesn't seem to me that this group is going to be able to do all these great things and if we don't have sort of a plan for making them concrete, or at least recommending them, they're really never going to happen.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Well I think Bill that is the point. We're not taking on another full-time job for the next year, right, none of us are. I agree with you. But I think our job is to highlight what needs to be done.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

Um hmm.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

And that's really in general, what the Policy Committee's workgroups have done; they've pulled on existing materials and given them attention, or they've pointed to the lack of activity and understanding. And there's been various responses from ONC, including major initiatives to address things. But if you look at issues on the lack of standards, the whole S&I framework got spun up and there's been a lot of people working on that over the last couple of years, to move ahead standards. So, there could well be something like that that gets spun up for this, although it's not quite as jazzy as technology, for those who are standards guys anyway. So, we'll have to see what happens, but I think we should put forward, these are the things we have identified that need to be done.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

Um hmm.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So Bill, you had put forward a note about – were we getting too focused on what's being done by the community colleges, is there some other emphasis that we should bring in around that?

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

Well, I think that a lot of the skills with IT, and I've certainly learned a lot about the community colleges and what they do in the last several years, being involved in grant-funded projects from ONC. But, there are some – some of the informatics workforce is going to need to be very highly skilled with skills around collecting, analyzing, managing big sources of data. And by having the...I mean the focus of the document, at least as it's written so far, seems to be on the community colleges, which to me is just part of the higher education spectrum and it happens to be a part that I don't reside in. And I just want to make sure that the other parts of higher education, particularly things at graduate level. I mean, even AHIMA is pushing the notion that entry-level HIM people should be Master's trained. And so, I just wanted to make sure that that point of view is represented.

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

This is Norma Morganti and I'm thinking – commenting on what you just said Bill, that perhaps again, if we look at recommendation number one, as we identify and validate the competencies, that that really sets the stage for what level of education will be required, and where all the educational institutions would fit in. And to me, that's how I was really looking at our recommendations. Of course, we've had funding for workforce initiatives, but I didn't read that as being the totality of what has been impactful or what could be done or what needs to be done. And Patricia has brought up in the past that we also need to reach back into secondary education; so, I'm hoping that we're not losing that whole pathway or the different levels or career ladders that could be available to meet the need.

Joe Heyman, MD – Whittier IPA

This is Joe. I know this is later in the document, but as long as we brought this up, could somebody define for me secondary and post-secondary. Are we talking about high school and college or are we talking about something else?

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

No, we're talking about K-12 as secondary education, K through 12 and then post-secondary would be after, everything 2 year institutions forward.

Joe Heyman, MD – Whittier IPA

Well, I think from – I frankly didn't know that and I think that most people, or at least many people, wouldn't know that. So, I think when we get to that, I think we should be more specific.

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

I just wanted to – I agree with you Norma about number one, as its worded is very broad. I guess that I was sort of looking through the back part of the document that has the particular resources and was wondering whether maybe that part of it needs to be more expansive. There are competencies that groups like KHIM have developed and AMIA and others, and so somehow kind of representing that whole spectrum. Because the list of things there now are, at least in my mind, somewhat focused more on the, I don't know, for lack of a better term, entry level of higher education.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So, I'm reminded – one of the reasons on that first slide I went back and included the three audiences is I think, that we need to not under-emphasize that in what we present. Because in each of those audiences, there is a hierarchy of skills and competencies, but we need the full stack, if you will. It's not enough to just say well, health IT is now integral to every health care job, so every health care worker needs some training in health IT; that's true, and we shouldn't minimize that and we shouldn't minimize how much of a change that is from ten years ago. But on the other hand, we're desperately in need of people who really understand how to make good use of data and use it to drive care decisions for an individual patient and care decisions for a population and how an organization works. And our lack of ability to work with the data that's now getting automated I see as a huge hindrance, actually taking these systems the place that they can go and achieving the results that we all want. If we really want to improve care, we need to be able to use these tools to help us understand where the problems are and where the opportunities are and without that, we're going to be trying to solve 21st century technology issues using 19th century paper

data-gathering tools.

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

I couldn't have said it better. I completely agree.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Like I don't have an opinion about that, right. So, what I'm thinking Chitra is, maybe if we make a pass through editing some of these things before we take it to the rest of ... the larger workgroup, is that we look to identify some of the breadth, like this is a really broad charge, we don't want to minimize that in what we have in these recommendations. And it's in the breadth that part of the challenge and the importance of this work is.

Chitra Mohla – Director, Workforce Programs Office of Provider Adoption Support (OPAS), Office of the National Coordinator

Yup.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Okay, I've got a question about – for the group about in five we talk about – we have that interesting phrase, health care of the future. And a couple of us so far this call have talked about the need to make sense out of data. And in our recommendations, there's a theme of team-based care, which came out again last week in the hearing on documentation. Are there a couple of other macro things like that that have come up in our deliberations or that you're seeing every day that you think we need to put out there, so that we're actually asking for – we're providing some direction on what some of the high-level competencies might be, based on what we think the future's going to look like.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

This is Bill again. I can throw out a couple. One is, I mean this kind of gets into sort of health care of the future, but population-based management, also things – value over volume, a lot of things that are almost becoming buzz words. I think another big one is patient engagement, there's a lot of discussion going on around that. It's going to require people that understand how to implement personal health records, health information exchange if people want their data to flow to one place over another. I mean we're really kind of talking about the totality of sort of the vision of health care reform and the IOM report from last fall.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Right.

Stuart Werner – Health Care Industry Lead, Office of Workforce Investment – US Department of Labor, Employment & Training Administration

This is Stu Werner from ETA. I've been listening carefully, I joined a little bit late but I did want to jump in about these critical workforce linkages and suggest that for example, the Area Health Education Centers, the AHECs, were reauthorized in the Affordable Care Act and they have a provision that requires them to coordinate with the Workforce Investment Boards. And although we don't specifically say that, we have federal, state and local agencies, which I assume includes that, there may be an opportunity here to really connect more substantially with these Workforce Boards that could provide training funds at some point. Certainly would be involved in understanding on-the-job training that you've referenced before or registered apprenticeship models. So I'm advocating for a more specific reference to the workforce entities.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So, I like that because a link into other federal activities, federally supported activities.

Stuart Werner – Health Care Industry Lead, Office of Workforce Investment – US Department of Labor, Employment & Training Administration

Right. I think Bill's point was so well taken, how are we really going to do this? If the Workforce Investment Act is reauthorized at some point in the future, it would just be helpful to see these meaningful connections between provisions in the Affordable Care Act and also in the reauthorization of anything that comes under WIA.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Well, and given that article I circulated about what made England so great in the Industrial Revolution, a big piece of that was apprenticeship.

Stuart Werner – Health Care Industry Lead, Office of Workforce Investment – US Department of Labor, Employment & Training Administration

Interesting, yes, absolutely – and I'm sure Chitra's well aware of this, but our folks from the Office of Apprenticeship were speaking again with Patricia Dombrowski and Chitra and making those references to both the medical doctors who are involved in an apprenticeship program at the Centers for Disease Control and Prevention, as well as the more entry-level examples that could exist.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Okay. So I'm hearing a broad brush around data analytics, teams, population management, patient engagement, value over volume, things that are part of healthcare reform, some of the IOM reports. So, I'll put out something that struck me listening to the discussion around documentation, and thinking about my own experience with healthcare providers as they're treating me as a patient and how they're interacting with their EHRs. And I feel like there's a paradigm shift, right. In the old paradigm, you had your intera – you were mostly solo-practitioner, you worked primarily with the individual in front of you; you had your notes, your memory of your interaction with this person. Now, we don't have to go back very far when even in big cities the model was primary care docs that even made house calls, that was my experience as a kid in the 50's, early 50's. And that model in many ways still exists inside our EHRs. They have great tools for bringing forward information that's already there for creating dashboards, for surfacing things, but the actual way in which clinicians interact with that computer is still sort of the – and Joe, feel free to jump in if I'm way off base here. But I still got the sense of it's more like a batch interaction, like there's a review of what was in the record prior to seeing the patient, there's the interaction with the patient and then there's a documentation cycle.

Joe Heyman, MD – Whittier IPA

That's exactly right.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

And it's not really a tech partnership, it's sort of like saying, we're going to take the mail-order catalogs and we're going to make the Internet look like mail-order catalogs, right. And you have to fill in this form at the end of your browsing and then that form gets somehow uploaded into the website in the process, right. And that's not how the commerce sites work, completely ... active and they're leading you to new things all the time.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

This is Bill. And I mean there's a lot of reason for that, I mean one of it is that the cultures been slow to change, but part of it is the E&M, I don't know if this came up in the discussion at the meeting you were at ...

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

E&M was all over the place.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

E&M codes, I mean they basically provide that kind of incentive; you basically get reimbursed based on the volume of what you put into a note. And so, that's a big impediment. I don't know if any of you know Peter Basch, he's written a lot on this topic. It also leads to problems like copy and paste, which is a huge issue and a lot of people have trouble trusting sometimes what's in an EHR if they sense that people are just copying things forward.

Joe Heyman, MD – Whittier IPA

Bill, this is Joe, and I do know Peter Basch. And I think one of the things that came out is there is sort of a misunderstanding that putting that volume in there changes the E&M code. The E&M code is based on what you do, and you need to document what you do, but the actual volume of information doesn't really change the E&M code. And I would say ...

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

... change ... we have a cultural misunderstanding and it's led to a huge behavioral problem.

Joe Heyman, MD – Whittier IPA

Exactly. And the other thing I would add, to what you said Larry, is some things really have changed. It's true that when there is an encounter with the patient, that encounter must be documented, just for medical-legal reasons ...

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Right.

Joe Heyman, MD – Whittier IPA

... even if there were no E&M codes, that encounter must be documented. But there are encounters that happen between patient visits that get documented in many different ways, depending on who the physician is and who the patient is. I'm thinking in terms of patients who contact me through a web portal, sometimes I bring that into the patient's record, sometimes it stays in the portal. When they call for a prescription that usually gets added. There may be a review of the record first, if you know the patient real well, you may just write the prescription. If it's just to add two months on because the patient is going to be back two months later than she expected to be, it may just stay in the ePrescribing program. I mean, there are some changes from the old paper way.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Um hmm. So, you're right, I shouldn't over-dramatize the shift that's happening. But it feels like one of those areas that is going to change a lot, and some of the discussion last week on how documentation works and how teams work ...

M

Right.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Is – there really is a shift happening, and there is more information available. It's sort of like the catch-22 of health information exchange.

Joe Heyman, MD – Whittier IPA

Well, I think the larger the organization, the more likely it is that the medical record looks different from an individual physician's office, because in large organizations, especially those that share a medical record, the entire team enters information into that medical record.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Right.

Joe Heyman, MD – Whittier IPA

Whereas in an office like mine, I mean basically it's just me entering information and sometimes my assistant will put in blood pressures and stuff like that, but that's it. I do the history taking, I do the physical exam and I enter all the information.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

And also you're more likely to, if the record's starting to look like it needs a little bit of weeding, you're more likely to weed it, because it's all yours.

Joe Heyman, MD – Whittier IPA

Exactly. My records are very, very brief, no question about it.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Well, I'm thinking ...

Joe Heyman, MD – Whittier IPA

And also that is a function also of the software that I use. I use software where on the left side of the screen, I can see the stuff that usually doesn't change and on the right side of the screen is my patient visit. I don't bring the stuff on the left side into the patient's visit, unless there's some important reason to do so, like I'm taking her to the hospital for surgery or something. But other than that, I leave the stuff on the left side on the left side, and my patient note only contains information on the right side. We're getting a little bit far away from education ...

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

We are, we are. And I guess the – to me the value of this discussion is this is sort of the depth to which I think that both the technology and the training can look at what works and what doesn't work. And until it gets to the depth ...

Joe Heyman, MD – Whittier IPA

Right.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

... it's not actually going to improve the care we provide; until we start ... these issues get raised. So maybe we're sort of rolling around one more time in the mud of where we are, but I kind of feel like we're at a change in ... a cultural change, if only because HITECH has been successful, at least at the hospital level ...

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

It brings home – this is Bill. It brings home that point that that middle group, that informatics and health IT group really needs to understand where health care is going and to be able to kind of see the systems they're implementing and how they're going to steer them in that direction, the functionality.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Okay. It feels like I've taken us in enough of an excursion here.

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

Can I please share one very brief anecdote with the group? I was giving a lecture – most of you know, I'm on the faculty of a medical school here in Oregon. I was giving a lecture to medical students about informatics and data and I asked them to raise ... third year medical students to raise their hands if they'd ever heard of meaningful use and I was stunned that just a fraction of the hands went up. I've talked to audiences of physicians where all the hands go up, but it really stunned me. So, clearly educating the health care workforce too is really critical.

Joe Heyman, MD – Whittier IPA

Well maybe some of us are hoping that eventually meaningful use will disappear and it will just be use.

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

Um hmm.

Patricia Dombrowski – Bellevue College – Director, Life Science Informatics Center

This is Patricia Dom–

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So on that focus, it will just be use, maybe that's the right kick-off to look at our recommendations and see if we have anything that we want to shift in them. And maybe we can even get done in fifteen minutes that would be great.

Patricia Dombrowski – Director of the Life Science Informatics Center, Bellevue College

Right. This is Patricia Dombrowski, just to key-off of Bill's last comment; I couldn't agree more the wider point, which is something that we're addressing in some of the work that we're doing right now, that so much needs to be done. And that is both addressing training and education needs in clinician training and allied health profession training, as well as incumbent worker training. And that may be implied in these recommendations, but I think Norma and Bill, anyone else, would you agree that that is one of the really

unaddressed, kind of unspoken, ungauged needs that we have right now.

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

Patricia, its Norma. I would agree with you wholeheartedly and ...

Patricia Dombrowski – Director of the Life Science Informatics Center, Bellevue College

And Norma, do you see that addressed in the recommendations or do you think it's sort of broadly – I've been kind of going back and forth about this. I know we need to keep these very broad and advocating educational programs is – but I'm just wondering if there needs to be sort of a specific call out.

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

Well I – go ahead Bill.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

Yeah, I mean I certainly agree. Although the question is, how big a focus this group wants to take. It's certainly worth mentioning, but whether ... how much detail we want to go into on that issue, I don't know, I have mixed feelings.

Patricia Dombrowski – Bellevue College – Director, Life Science Informatics Center

I do too Bill and it just keeps coming back, as we keep finding in our work, to patient safety. Because those that are on the job now, even in, and especially in peripheral roles, are often those that are tripping up over implementation of safe procedures, and are very, very eager for this kind of training. That's been the big surprise in our work, to find that out. But, I won't belabor this only to have just been sort of going back and forth about whether there needs to be kind of a line drawn under that or not. And Norma, I'm sorry; I think I might have talked right over you.

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

No, not at all, I think we're good. I think we all are on the same page ... for that.

Patricia Dombrowski – Director of the Life Science Informatics Center, Bellevue College

Okay, uh huh.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Okay, so help me be clear about what you're suggesting. This is a call out for those on the job now or ...

Patricia Dombrowski – Director of the Life Science Informatics Center, Bellevue College

Right, so – actually, there's two strands and I'm just putting them both out there.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Okay.

Patricia Dombrowski – Bellevue College – Director, Life Science Informatics Center

They're related in a way because they are peopling other than those new to – those entering education in this area.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Um hmm. Right.

Patricia Dombrowski – Bellevue College – Director, Life Science Informatics Center

So there are those incumbent workers, those already on the job that are doing the best they can and learning the best they can. And there are also very specifically, as Bill is mentioning, clinicians in training and allied health professionals in training that are lacking exposure to this in their curricula.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Ah.

Michelle L. Dougherty, RHIA – AHIMA Foundation – Director of Research and Development

And Larry, this is Michelle Dougherty. I would say that came up as well last week at the Clinical Documentation Hearing, the lack of understanding of how systems work where they can help benefit care, improve safety, things like that and to some degree, a technical side for the clinician.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So where historically there might have been a couple of folks in any one class of any of the clinical or allied health fields that would sort of become the tech geek for the class, that's not good enough anymore. Right? Because these tools are embedded everywhere, every health care decision relies on the tools, not everybody needs to become an expert in how to take apart the software or an expert in informatics, but they need some greater appreciation of the strengths and weaknesses of the thing they're using.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

Very much so. I think they need to have an under ... some familiarity with the issues, why it's important to adopt standards. They ... skills at thinks like using search engines, which even young people who live on the internet aren't necessarily good users of resources like PubMed. There's a whole variety of skills, I think, that clinicians and clinical students need. I guess the question is whether ... how much we want to broaden the message that this group is going to put forward to deal with that topic as opposed to more narrowly kind of focusing on the health IT and informatics workforce.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Yeah well I think, personally I feel like we have to address both, the working in a healthcare provider organization, the current workforce is the huge bulk of the workforce. And we may like to complain about our turnover, but most of the turnover is, someone leaves us to go work for another healthcare provider, we hire someone from another healthcare provider. It's not like everybody's coming to us fresh out of school and the problem will be solved in five years. This is a forty-year problem and over the forty years, this stuff is going to change as well, but this is our current world. And I couldn't agree with you more about there's more to searching than Google. And even within Google there are people who are better searchers than others.

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

I'm sorry, this is Norma Morganti and I just wanted to go back to the comment that Patricia made. And I know that previously we had reviewed a document that came out of a SMA validation working group that we hosted here under some additional work that we're doing under the ONC Workforce Grant. And we just had a second webinar with our subject matter experts to validate some more detailed competencies and we are getting ready to get into a finalized draft of some very detailed competency frameworks that I think will at least go a step further into helping to identify some of these areas that Patricia, you had indicated. So what is it that folks who are in the clinician roles in these new, in the care community, what will they need for inter-professional cooperation? What do they need to know about change management? So, we've gotten some really great feedback from our subject matter experts and starting to build-out these not necessarily by distinct roles, but by groupings of tasks that typically need to happen in these new care models. We're also trying to connect health information exchange, meaningful use, population management behind that. So, while it's not going to be ... intended to be the complete set of everything that everyone needs to have, I think that we need to start – when I think about these tools and these competency frameworks, it's a way of getting the message out to those in education, of what they need to start building into their curriculum where there may be gaps, where there are opportunities to leverage the work of others. So, we're hoping to have that in a final form in the next couple of weeks, and perhaps be able to share back a little bit of that with the working group.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

That would be great, because that would actually put some substance under number one. Right.

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

Agreed.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

That's what I'm hearing, this would identify and validate competency, this is...

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

It's, yeah, it will be with the input of a lot of subject matter experts who are in the field right now. So, we feel that it's a first opportunity for us to get those out there and certainly get more comments and input.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So it would actually be great to fold some of that into this process, because I know how many members of the Policy Committee and all the workgroups love to dive into detail, as much as we pretend that we stay at the policy level. And that sounds like the right detail for people to be aware of and comment on, even if they're not going to truly shape the direction the competencies go in, but I think it'll give some support for what we've been doing.

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

Absolutely.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So you said that's in the next few weeks that would actually work out well with our timing.

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

Yeah. I actually think that we'll be ready to put some curriculum behind some of the areas within the next two weeks, so I may even be farther along, but for sure we'll have a final ... our detailed competencies and a road map for these roles within the care team.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So that would be great. So is that something that we can get sent to us as it comes together and we'll fold it into what we're, what we have, at least in the appendix and it might even make it into some of the example slides.

Norma Morganti – Cuyahoga Community College– Executive Director, Midwest Community College Health Information Technology Consortium

Yeah. I'll forward it to Chitra to get it to you.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Great. So, we've got a fair number of comments we've gotten from folks. So what's your advice on how to proceed? Is this something that Scott, Chitra and I should take on, folding the comment into a single document and circulating back? Are there cross-comments that some folks would like to make before we take that editing task on?

Bill Hersh, MD – Oregon Health and Science University – Chairman, Department of Medical Informatics and Clinical Epidemiology

This is Bill. One other comment I wanted to make is that it seems like is that it seems like this process has been somewhat disconnected from employers. I mean I know that Norma's process has engaged them somewhat, but there are still a lot of employers out there that don't even know about the ONC workforce programs and I mean I always find it useful as an educator to get their feedback to sort of give me a reality check on the kinds of things we're teaching. So, I somehow hope that the whole spectrum of employers, whether it's healthcare organizations, companies, healthcare providers, etcetera, need to be part of this process, too.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So, Samantha, are you still on the line? Do you want to chime in on that? Any thoughts on how to engage other folks from the employer side, not to put you on the spot or anything.

Samantha Burch Halpert – Federation of American Hospitals – Vice President, Quality & Health Information Technology

Yeah, right. I enjoy being put on the spot. Yeah, I think some of it might be being very conscious of scope; I mean, I think that at least on the hospital and provider side, I think people are already overwhelmed with what's on their plate. So I think however, we engage, in terms of getting information, I mean I think they are interested in knowing that there is this pipeline of people coming out. I think I'd have to give some more thought about what the best avenues might be for that, but I think you're right, I think there is a disconnect. Because I think there's still a lot of talk on the hospital side about staffing shortages and not a lot of awareness about what ONC is already doing. So, I'm happy to give that some additional thought.

Patricia Dombrowski – Bellevue College – Director, Life Science Informatics Center

This is Patricia Dombrowski again. HIMSS has a Career Services Taskforce, on which I serve, and if it would be the pleasure of this group, we could certainly ask for review and comment among that Taskforce, if that would be helpful, and it may be helpful to turn to other professional associations as well.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So, it sounds like we're actually doing some of the things that were in our recommendations, right. We're actually doing the outreach to trade associations, professional associations.

MacKenzie Robertson – Office of the National Coordinator

This is MacKenzie. I would actually hold off on circulating formally draft of group recommendations. I just ... just like Larry said, it sounds like we're actually starting to act on things as opposed to just recommending them, to follow the formal chains up through the Policy Committee. So, I just get a little concerned if we're going to be sending it to other taskforce to comment on. I would say we might want to hold off on doing that formally, I mean if its informal conversations, I would think that would be appropriate. Let me know what you think on that.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

I guess what I'm hearing is a couple of things. I'm hearing that there's engagement with the employers side of things, to make sure that the folks who are going to be delivered are actually going to have the skills that would be useful. And so that conversation is clearly an ongoing one. And there's an education piece to let those folks know that there are training programs that are intended to address some of the needs, and they could be providing feedback around those programs. And also, it might be helpful if some of these are not like future, some of these are, you can run this program now. Chitra and Bill and I were engaged in a conversation with someone at Kindred, right, about the change in the company that's been delivering training for us on health IT issues is no longer going to offer the training around the ONC certification. What other options are out there? And so those are useful conversations to have, not just among the few of us, but to have broadly.

Stuart Werner – Health Care Industry Lead, Office of Workforce Investment – US Department of Labor, Employment & Training Administration

This is Stu Werner. One other piece related to the employer perspectives I think will be the consumer messaging that's going on from these employers to their participants in these plans that'll be accessing health IT systems, electronic, their own personal electronic health record. And, again, engaging the employers may speak to some of their marketing and messaging around electronic health records that would also be useful for the incumbents.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

But that does go beyond the charge.

Stuart Werner – Health Care Industry Lead, Office of Workforce Investment – US Department of Labor, Employment & Training Administration

Oh, excuse me then. Okay.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Well, I'm just mentioning it, I have no objection to it, I'm just pointing it out and that's all.

Stuart Werner – Health Care Industry Lead, Office of Workforce Investment – US Department of Labor, Employment & Training Administration

Okay. Sorry.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Well and it is, I agree, it is an emerging issue. We're certainly hearing from providers saying, I can't be responsible for a consumer's behavior and ...

M

Exactly.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

... some of that is because there's a belief that the consumers are not going to be engaged...

Joe Heyman, MD – Whittier IPA

I've got to go.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

... in this particular thing. So, I think it is a broad need, but in terms of the more core workforce issue, it's not really a workforce issue need.

Stuart Werner – Health Care Industry Lead, Office of Workforce Investment – US Department of Labor, Employment & Training Administration

Thank you, point taken.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Okay, back to those future things.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

One – if people haven't read it and I'd be happy to circulate it around, there was a survey put out by CHIME, which is an organization of CIOs, kind of talking about the staffing shortages that CIOs are facing. And one of the sidebars of this report was this relative lack of awareness of the ONC programs. It's certainly worth the read for people...I mean, it certainly paints a picture that there is a lot of need for skills, and healthcare organizations are at risk because of the lack of people with the right skills.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Well, and it sounds like the perfect thing to put in our appendix as well. It supports the recommendations that say we need to engage the associations, gives people some concrete things to act on. Okay, so we're at one, or a couple of minutes after. I didn't hear any objection to Chitra and I taking on an editing role. Are we good to wrap this up, get some public feedback at this point, or are there some other things you guys want to discuss before we do that?

MacKenzie Robertson – Office of the National Coordinator

So this is MacKenzie. I would just add the next step, assuming the recommendations with Larry and Chitra your edits, are agreeable to the group, we would want to schedule a call to brief the Certification and Adoption Workgroup on your recommendations. So that's the next step to this process, just to put that on the table as well.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Thank you. I've been taking that for granted. That would be the next step. So we would edit the document, circulate it for a final it looks okay, good enough to share with some folks who are still kind of inside the family, and then get their feedback. Does that sound reasonable?

W

Um hmm. Yes.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

So our next...we would have an email exchange within this sub-workgroup, and assuming there wasn't any major uprising, we would then pass the document on and schedule a call with the larger workgroup. And MacKenzie, in terms of practical logistics, would we bring everybody in for that call?

MacKenzie Robertson – Office of the National Coordinator

Yeah, I would – I mean, I would share the calendar appointment, just to let the subgroup members listen, but I would charge it to you and Scott to do the presentation and get the workgroup feedback. But I would definitely share it with the subgroup so they can hear.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Great.

MacKenzie Robertson – Office of the National Coordinator

So should I open the lines for public comment?

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Works for me. Thank you.

Public Comment

MacKenzie Robertson – Office of the National Coordinator

All right, operator, can you please open the lines?

Caitlin Collins – 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 have a comment. Carol Bickford, please proceed.

Carol Bickford – American Nurses Association

Good afternoon. As I was listening to the conversation, looking at your document you had on the screen, I wondered if there was incorporation of educational opportunities for leadership. Sometimes there are those of us who lived the experience are very concerned that the leaders haven't a clue what's going on or making inappropriate decisions. We've been focusing on the workforce being prepared, but does your content also incorporate the management and executive level needs, different than the worker bees.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

That's a good point to make sure that's clear, because our discussion has incorporated those as well. Not so much today, but our discussion over the months getting ready for this.

Bill Hersh, MD – Chairman, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University

And this is Bill Hersh. I can say that the ONC Health IT curriculum includes some components on leadership and management issues. So probably people who are getting educated in health IT are getting some exposure to that.

MacKenzie Robertson – Office of the National Coordinator

And are there any more public comments?

Caitlin Collins – Altarum Institute

We have no additional comment at this time.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Okay, well let's wrap this up. Thank you all the workgroup members, this has been great conversation, it sort of feels like we've got something that we can bundle up and pass on to the larger workgroup.

MacKenzie Robertson – Office of the National Coordinator

Great. Thank you everybody.