

**HIT Standards Committee
Final Transcript
December 14, 2011**

Operator

Ms. Deering all lines are bridged.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Thank you. Good morning this is Mary Jo Deering in the Office of the National Coordinator for Health IT. This is the 32nd meeting of the Health IT Standards Committee and it is a public meeting. There will be an opportunity for public comment at the end. I would ask members to identify when they speak both for those on the line and for the transcript. I'll begin by taking the roll. John Perlin?

Jonathan Perlin – Hospital Corporation of America

Good morning.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

John Halamka?

John Halamka, MD, MS – Harvard Medical School

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Dixie Baker? Anne Castro?

Anne Castro – BlueCross BlueShield of South Carolina – Chief Design Architect

I'm here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Aneesh Chopra? Chris Chute?

Christopher Chute - Mayo Clinic College of Medicine

Present.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

John Derr?

John Derr – Golden Living, LLC

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Carol Diamond?

Carol Diamond – Markle Foundation

Good morning.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Floyd Eisenberg?

Floyd Eisenberg – Senior Vice President of Health Information Technology - National Quality Forum

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Jamie Ferguson?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Tim Cromwell?

Tim Cromwell – Veterans Health Administration – Director Standards & Interoperability

Good morning.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Leslie Kelly Hall?

Leslie Kelly Hall – Senior Vice President for Policy for Healthwise

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

...

...

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Stan Huff?

Stanley M. Huff - Intermountain Healthcare

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Kevin Hutchinson?

Kevin Hutchinson – Prematics, Incorporated

Good morning.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Liz Johnson?

Elizabeth Johnson – Tenet Healthcare – Vice President Applied Clinical Informatics

I'm here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Rebecca Kush?

Rebecca Kush – Clinical Data Interchange Standards Consortium

Present.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Arien Malec?

Arien Malec – Coordinator for the Direct Project and S&I Framework

Good morning.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

David McCallie?

David McCallie, Jr. – Cerner Corporation – Vice President of Medical Informatics

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Nancy Orvis? Marc Overhage? Wes Rishel?

Wes Rishel – Gartner, Incorporated

Cock-a-Doodle-Do.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Thank you, Wes. Doing his rooster call. Chuck Romine?

Charles Romine

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Cris Ross?

Cris Ross – Executive Vice President & General Manager, Clinical Interoperability SureScripts

Here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Walter Suarez?

Walter Suarez – Kaiser Permanente

I'm here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Terry?

Sharon Terry - Genetic Alliance – President and CEO

I'm here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Jim Walker? Doug Fridsma?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

I'm here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Jodi Daniel? I think she is here. Others from ONC?

Josh Seidman – Office of the National Coordinator

Yeah, this is Josh.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

And others on the line from HHS?

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

Mary Jo this is Dixie, I'm not from ONC or HHS, but you didn't call my name and I'm here.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Oh, I called you at the very beginning; you're first in the alphabet Dixie. I'm sorry I didn't say it clear enough. Okay, I will turn it over to you John. Thank you very much.

Jonathan Perlin – Hospital Corporation of America

Well, thank you and good morning to everybody. First I believe you heard two familiar, though formally new names as members of the committee and want to welcome Leslie Kelly Hall and Floyd Eisenberg. We've of course been working with Floyd fairly closely around the quality metrics, but I'd ask each of you to perhaps just give three or four sentences on what you're doing so that everyone on the committee can get a sense of your background, and Floyd I know we've been working with you, but in that process I'm not sure everyone may know your day-to-day title and operating responsibilities.

Floyd Eisenberg – Senior Vice President of Health Information Technology - National Quality Forum

Sure, well thank you. I'm as Senior Vice President of Health Information Technology at National Quality Forum and our activities are many, but specifically with respect to this group, revolve around keeping up to date a quality data model, which is a grammar for expressing quality measures, and also creating a measure authoring tool which is available to HHS contractors to use the data model in order to express measures. We also are involved in some of the re-tooling of measures last year and are consulting around that this year with a lot of very positive findings about how to move that forward as we go forward.

Jonathan Perlin – Hospital Corporation of America

Well, thank you for being part of the group more officially now and we certainly want to recognize and appreciate Janet's service up to now. As well, let us welcome Leslie Kelly Hall and Leslie, if you'd similarly introduce?

Leslie Kelly Hall – Senior Vice President for Policy for Healthwise

Yes, certainly, thank you, John. I'm Leslie Kelly Hall and I'm the Senior Vice President for Policy for Healthwise. We are a consumer health information company, a nonprofit located in Boise, Idaho. I'm a former health systems CIO and very committed and passionate to patient engagement and so we are very much involved in every moment in care empowering the patient to take better care of themselves and to be more engaged in their health care and the healthcare system.

Jonathan Perlin – Hospital Corporation of America

Well we certainly appreciate you're being a part of the Standards Committee and especially appreciate the perspective that you'll bring to our deliberations. So, we welcome you.

Leslie Kelly Hall – Senior Vice President for Policy for Healthwise

Thank you.

Jonathan Perlin – Hospital Corporation of America

Before John and I and if Doug wants to talk for any opening comments move to those opening comments, I'd like to actually move to our first technical order of business, which is approval of the minutes. I'm going to ask you take a moment to take a look. I offer one, first I need to emphasize how remarkable a job the Office of National Coordinator does catching all of the nuances of an extended conversation and instilling that to a reasonable document. But as much fun it is to swim in the model driven health pools, which is referenced twice on the first page, I believe it was meant to say model driven health tools with a "t". So I will offer that as one minor amendment and ask anyone else where any other corrections, amendments that you might want to offer as we move to approving the minutes?

Okay, are there any objections to move forward then with minutes? Hearing none, we will assume consensus on that and thank the committee and The Office of National Coordinator and incorporate those into our record. As always, I believe that a telephone virtual meeting requires greater concentration and I appreciate everyone's participation today, just to remind if you do have to leave the room for moment please don't put your phone on hold as that creates all sorts of music or other advertisements for the rest of the folks. I appreciate your using the mute function instead. If you have to step away as well, you know, please do. Identify your name when asking to comment on any of the activity of today's meeting it will just make our meeting a lot easier.

I think we can use our time very efficiently today. I know it is moving toward the holiday season and particularly appreciate everyone's being part of today's meeting, a very robust attendance. We carry forward a more informational session today that same sort of theme of elaborating for the development of standards from the perspectives of content, vocabulary and transport that we have particularly complex work in the dimension of quality and the quality itself begets complex discussions that Floyd has reminded us of in the areas of value sense.

Our discussion of implementation of the standards is of course goal directed toward the larger purpose of advancing health and care in a very broad socially important sense, but it is also very pragmatically directed at moving to have the set of resources necessary to realize the next set of emerging objectives for this second phase of Meaningful Use. Certain ambiguities about the timing of that of course off the table with a one-year extension, however, I think Doug and Farzad have reminded us from the very outset that we need to have a clarity so that people who are building toward something aren't just making turns when they see an obstruction in the highway but rather laying out a route between where they are and where participants in the healthcare ecosystem need to be to participate fully at any given moment.

So, as we look at that larger purpose toward advancing health and care, and value, and the more specific activities of Meaningful Use 2, I know that it's very much a challenge in terms of the work we do. John Halamka and I were reflecting last night that our colleagues in the Policy Committee work to really help to focus the attention on realizing the aspirations for improved health and care, and they provide through the process a number of goals which candidly may or may not have expand capacities, technologies, standards to realize those aspirations.

When looking at the two sides of the coin then that we can offer sometimes yes, it is possible by doing thus and such, it's terrific when we can offer that. The other side of the coin though is that we're at a point where the data model doesn't support the aspiration. And I think we're at our best when we can offer some clarity as to laying out a route between what we have now and what that aspiration might be, particularly if it can be sequenced through logical way points like different stages of Meaningful Use.

So, just begin with some end of year reflection that we have an emerging body of work that's in support of both a larger broad set of principles but a more immediate set of tangible goals and that at our best we identify ways to help achieve the policy objectives, but do have sometimes the constraint of the standards and all the dimensions that would support this aspiration. So, really appreciate your help in identifying how we might get to those policy aspirations in the most reasonable way, reasonable being both credible in terms of validity and reliability of things that have been proven and tested, things that are likely to be predictably valid and reliable in the basis of analogy from other domains. Frankly, areas where very goal directed work would help to move us forward. I say that by way of introduction to today's conversation really a number of those principles coming together from the broader policy as well as some pragmatics of the Affordable Care Act requirements on administrative simplification and the like, information, a further update on Query Health and really a delight to see and welcome Judy Murphy in her new role as well as really further refinement of the pragmatics of realizing this advancing the agenda from the Implementation Workgroup and a continuation of that continuum from policy intent through objective through implementation, guidance and testing as a part of laying out that path.

Appreciate as always, Doug Fridsma's, not only general updates, Query Health becoming very interesting and the lab ordering compendium really moving as something that's been in our scope for a number of meetings now, it's really a much more tangible set of activities, but also insight as to how we segue from what has been accomplished thus far to best support the ONC work plan for the year ahead recognizing both larger goals and the very specific demarcations of the stages of Meaningful Use. With that, let me turn to the Co-Chair, John Halamka, for any introductory comments he'd wish to offer.

John Halamka, MD, MS – Harvard Medical School

Great, thanks so much and good morning everybody. So, as I've done in previous meetings just want to reflect on what I see are some of the important work items that we're going to have today and in 2012 just so we don't lose track of the body of work we've all been discussing. So, I always break standards into content, vocabulary and transport. Content, there have been quite a lots of e-mails among many of us on the committee over the last month on Green CDA and what it means to use Green CDA over the wire and what are possible initiatives in support of Green CDA, what is the role of Stan Huff's semi-initiative and so there is a set of discussions that in FY12, in the next couple of months, we're going to want to have, on that particular topic, quite a rich discussion, it won't be on the agenda today, but don't want to lose sight of it.

I am currently sitting in the Radiology Department of Beth Israel Deaconess and I'm actually helping some of my family facilitate care because they've had to hand carry DVDs from one provider to another provider and I would like to make sure America eliminates that problem and we're looking at DICOM standards and radiology image across a community of care as something we want to do in the next year.

Also on content we talked about querying population health from multiple distributed databases also supportive clinical trials, clinical research, and simplifying quality measures both how they are substantiated in an EHR and how they are reported. Well, today on the agenda we'll have a very rich presentation, as John has said, about Query Health and related aspects of quality measurement and quality measurement standards. So, we will be getting to that content item today.

On vocabulary, of course we have the larger issue of taking the very fine work that our Vocabulary Taskforce has done on quality measurement vocabularies and wanting to extend that to problem lists, medication lists, allergy lists, labs, those items of clinical care in general, so that has to be a 2012 body of work. Lab ordering compendium something we'll discuss briefly today. So, certainly we could simplify inbound lab interfaces if that were standardized.

In the world of transport of course there is significant additional discussion to have. What is the role of the metadata specified in the ANPRM that we've discussed in previous meetings, how does that fit with regard to the content and transport standards that are likely to be in Stage 2. How does the NwHIN exchange evaluation we've done continue to go forward to recommend improvements and simplifications to the NwHIN exchange implementation guides and how do we accelerate provider directory pilots,

microdata, various types of IHE standards, looking at new APIs or RESTful queries, and how do we capture those lessons learned?

Well we will today have from Doug a report on the S&I framework. So we will be hearing on transfers of care, lab results, data segmentation and electronic submission of records so there will be in the S&I Framework some touching on these topics that I have outlined. But the bulk of our meeting, as John has said, will be hearing about administrative simplification from NCVHS, because there are a lot of statutory requirements there and our input is required. We'll hear about how testing procedures should best be specified in our certification and standards recommendations and we'll be hearing from ONC on Query Health, S&I Framework, and lab ordering.

Importantly, we'll end the discussion that Doug Fridsma is presenting, with a 2012 work plan discussion with the goal of having a crisply defined work plan by our next meeting. And what I hope is that work plan will include those content, transport and vocabulary items that we haven't yet gotten to so all of us will know, over the course of the year, like we did with summer camp, what we will be doing month-to-month and how we should best organize to do that work. So, I look forward to the discussion.

Jonathan Perlin – Hospital Corporation of America

Thank you, John and I want to remind that each of these discussions is essentially informational. I think it will be terrific to provide any feedback on the preliminary framework for 2012 to Doug, so a sense of the committee transmitted at the end would be our culminating act of this meeting. Before we move to the first presentation let me just ask Doug if there's anything that you'd like to introduce at this time or get into the agenda, Doug?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Thanks so much, John, and for all the participants who are on the line. We've got a robust set of slides and many of these things I think are there that I hope people will have an opportunity to review over time and help us kind of cue up what's been done. This in some sense is our opportunity to do some reflection on the work that's been done and to look ahead towards the work that we still need to do. We internally will be doing similar kinds of work with reviewing the programs that we've got ongoing within the S&I Framework and again, planning ahead to where we need to go. And I think my hope is that I can get feedback and input from this group to make sure that we are moving in the right direction, that if there are things that we can be doing better that we have an opportunity to provide that.

I've asked all of the presenters to, even though there's a lot of slides, to move quickly through things, because I think what's important in this meeting is to really have an opportunity to look ahead to the work of 2012 and make sure that we can start planning, you know, within ONC, we can start planning to get to the resources, the tools, the staffing, the other things to help be as helpful as we can to the committee and the work that the committee will be doing.

Jonathan Perlin – Hospital Corporation of America

Terrific and well said. And the topic of administrative simplification does have a robust slide deck and appreciate your counsel to elicit the discussion around that to recognize there's been ongoing hearings and other activities of the Subcommittee on Standards of National Center for Vital Health Statistics and the two co-chairs of that subcommittee are Walter Suarez and the Judith Warren and we'll turn the next set of the presentation over to both of them.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

John, this is Mary Jo Deering. I'm sorry to interrupt, but I did want to share with all the members that the public is currently unable to find the public dial in number and many of you may receive queries from people who know you. So, I wanted to share with those who are able to dial in what the public dial in number is. So, if you get this query you will know. The public dial in number is (877) 705-6006, (877) 705-6006 and of course you can certainly just send them to me and I apologize for the website being down. They are working on it now. Thanks a lot.

Lorraine Doo – Senior Advisor - Centers for Medicare & Medicaid Services

And Mary Jo and Walter and Judy, I wanted to make sure you knew that I'm on the phone and its Lorraine Doo if you need anything.

M

Thank you.

Jonathan Perlin – Hospital Corporation of America

Okay and thank you and we'll try to allow people to reconnect there and I think a number may be experiencing some website difficulties so we'll have to attend both closely to the words as well as the text of the document that was sent beforehand. And Mary Jo, I know in terms of honoring the spirit of the federal advisory committee those materials will be available publicly, so not quite perfect in terms of sequence, but we'll make sure those materials are available. With that, lets then move to the planned discussion on administrative simplification and health reform and welcome Judy and Walter.

Walter Suarez – Kaiser Permanente

Thank you, Jon and John for those introductory remarks. And happy holidays to everyone. This is Walter Suarez and I am a member of the National Committee on Vital Health Statistics and also of course serve here in the HIT Standards Committee. Judy Warren, who is with the University of Kansas and really an expert in informatics and terminology, I'm not sure if she's on the call, she was having difficulty being able to join schedule-wise, so I will be discussing and describing the work that we wanted to bring here and if Judy is able to join then she might want to make some remarks toward the end, and as Lorraine mentioned, Lorraine Doo, from CMS, is the lead liaison from CMS to the National Committee on Vital Health Statistics and the lead staff for the subcommittee on standards over in NCVHS.

So, I think just to introduce this topic I think one of the other big trends that we will be seeing and continue to see over the next year, more so in the next few years is what we've been describing in our own subcommittee and standards as the convergence of the two worlds that have always been kind of separate, the administrative world and all the administrative systems and transactions, and messages and standards, and the clinical world, and the clinical again systems, and transport, and standards, and messages because they are, at the end of the day, coming from the same information and from the same basis of an encounter with the patient or a description of a population in a health plan.

So, you know, we hope that this will be the beginning, as they say, of a very fruitful and closer relationship between the NCVHS and the HIT committees, the Standards and the Policy Committee. We presented this at the Policy Committee last week and so we are again hopeful that with this we will start to see this closer collaboration as we both are going to be dealing with standards in the very close environment of administrative and clinical worlds.

So the purpose of this presentation, and we can go to slide number two, is to introduce to you all and to discuss some of the requirements that came out of the Affordable Care Act. There is one specific provision under Section 10109 that asked the Secretary to seek input from the committees, NCVHS as well as HIT Standards and Policy Committee on specific topics, in fact into the future of standardization that applies to some of the administrative processes and so that's what brought us together. But beyond that, again there's other interest and we want to highlight one specific one, the work that is being done to establish, define standards for what is known in the administrative world as claim attachments. The submission of medical information in support of a claim and some other administrative processes and so here again is this concept of a convergence of the administrative and clinical world coming to play. So, we'll talk about those and some of the opportunities for collaboration between our committees and just leave with the description of the work plan of the Standards Subcommittee for 2012 just as a way of describing some of the things that we will be doing next year.

The next slide attempts to, and this is just an attempt to really present what is been seen as a tsunami really as a persistent storm of work that needs to be done in the standards world. We have HIPAA one as we know it with the new standards for transactions starting next year and the ICD-10 standard coming

up in 2013 and then what is being seen as what people call the HIPAA two-wave, which is all these new administrative simplification transaction standards and operating rules and other regulations as well as privacy and security related to HIPAA. So, there is that whole world, there is of course all the world of Meaningful Use and EHR standards and certification and metrics. There is the whole space of health reform with all its implications for Health IT and then there's a whole host of other activities including State Laws that are defining and expanding and in some cases constraining some of the work that is being done in Health IT as well. So we see this as an ongoing, you know, force behind all the work that our committees are doing.

So, the next couple of slides basically try to give a brief summary of what the committee is, the National Committee on Vital and Health Statistics is, for those that might not be aware of, it is a statutory committee of FACA with responsibility for providing recommendations generally on health information policy and standards to the Secretary. It was created over 60 years ago to really become one of the advisory bodies to HHS on health data statistics, public health and National Health Information Policy. Right now it is organized and composed of 18 individuals appointed by the Secretary with a broad set of expertise that come from different fields from health statistics to privacy and security experts, population and public health experts, and experts, and representatives from the healthcare systems and health services research and standards. So, we have a very wide variety of perspectives in our committee. We're organized into four subcommittees one focusing on population health, another one focusing on privacy, confidentiality and security, a third one focusing on quality and then the subcommittee on standards.

And the next slide just highlights some of the newer responsibilities. So, back in 1996 after, you know, almost, what 50 years of no changes in the statutory requirements for the committee, the HIPAA Law brought in some new legislative responsibilities to the committee basically requiring the committee to be the advisory committee to the Secretary on all the aspects related to HIPAA administrative simplification. In addition to that, in 2010, the Affordable Care Act expanded those through two sections, Section 1104 which required and expanded the need to advise the Secretary on a new round of standards including a standard for health plan ID, the new operating rules, new set of standards that apply to all the transactions under HIPAA, and then a new set of standards beyond the ones that have been already defined and in place and then this Section 10109, which asks for what's next in terms of new areas of standardization. And then it also asks for periodically, at least every 2 years, monitor the status of the standards and the operating rules and make any recommended changes as needed and that certainly is one activity that we are already starting basically.

The next slide just very briefly highlights a discussion of a subcommittee on standards and provides the basis for the work we're doing so the subcommittee is responsible for, really within the committee, providing the details behind recommendations and observations around administrative simplification requirements and so we define and identify, and recommend all the new standards, and then we monitor the implementation of those standards and recommend any adjustments, and one of the specific responsibilities is to put together and deliver what is becoming an annual HIPAA report to Congress.

Every year we have to deliver a report to Congress on the implementation on HIPAA and I wanted to put a plug on the report that we are issuing this year, actually in the next few days literally, the 10th HIPAA report to Congress. We took an opportunity of this being the 10th report to really look back over the last what becomes really 15 years in the passage of HIPAA and at least 9 years since the official start in compliance with the HIPAA standards, to look back and sort of take a critical view of what has been accomplished, what are some of the shortfalls, and what needs to happen next. So hopefully, you will all receive a copy of that report soon, I will make sure to distribute it to the committee when it comes out in the next few days.

The next couple of slides just summarize basically the work over the next five or six years of Standards Committee and the slide might not be able to be read very well but the intent is to really highlight the upcoming requirements from 5010 and D.O. and...Hello?

Jonathan Perlin – Hospital Corporation of America

Just remind people to please if you have to leave the phone for a moment use your mute function not hold. I appreciate the operator removing the lines that do that. So, Walter we will go back to you and then just note that the Altarum website is back up for people who want to follow there, but, Walter?

Walter Suarez – Kaiser Permanente

Thank you. Yes, I've been monitoring the website as well and noticed that it fell off, but it's back up. So, this slide that you're seeing is basically a quick summary of the timeline for each of the upcoming transaction standards and new standards, plan ID, and additional requirements. You can see at the bottom, you might not be able to read it very well, but one new requirement under the Affordable Care Act is for health plans to attest to basically certify by the end of 2013 for a first cycle of standards that the health plan is compliant with all the standards and operating rules. And so this is a brand-new requirement really before and until now we all, covered entities, have been implementing all these requirements but have not had to formally and officially, I guess, certify that we've been in compliance with all this so under the Affordable Care Act there is a new requirement. And I understand that CMS is going to be putting together some guidance and regulations related to how to achieve this compliance so that's an important point that health plans will have to be in to do. And it is only health plans within the entity subject to this regulation. So this doesn't apply to healthcare providers or clearing houses.

The next slide just the final one on the requirement and this is the one that highlights basically that by January 1st, the Secretary should solicit input from NCVHS, the Policy and the Standards Committee and SDOs, and additional transaction standards and operating rules for other areas, and so that's what provided the impetus for this initial work.

The next slide just highlights the specific requirements under Section 10109, basically points to the solicitation of this requirement to pursue greater uniformity in financial administrative activities and transactions, and items, and processes. So this is sort of the language from there. And the next slide provides some of the specifics. In the Section 10109 it actually highlighted a few issues, it was not intended, as I understand it, to be a comprehensive or the only things that need to be focused on, but just an initial set of issues to focus on for future standardization. So, one of them was the application process for enrollment of healthcare providers in health plan systems. So what we call the provider enrollment process.

The second area was the applicability of the HIPAA standards and operating rules to other forms of insurance like property and casualty, workers compensation, auto insurance. The third item was the standardization of forms to conduct financial audits required by health plans, whether it's Medicare requiring audits on providers or even health plans or others, or whether health plans requiring audits on others so it's a standardization opportunity for the financial audit process. The fourth item was basically whether there could be greater transparency and consistency in the way health plan claim edits are implementing. So, the process for editing claims when they come into a health plan, each health plan of course has their own way of doing those claims edits and the possibility of greater transparency, consistency, and some standardization of those methods could exert some simplification so that's another area. And then the last area was whether health plans should be required to publish timelines of payment rules, that's another point.

So, in November, mid November, the subcommittee on standards convened and kind of took the lead on pursuing the initial inquiry on these areas and convened a series of hearings around these specific topics and the next few slides will highlight the findings and I know I'm going to be moving fairly quickly to leave some time for discussion at the end.

So, the next slide highlights the first topic which the provider enrollment, the question being of course, can the industry move to a uniform application form, a more standardized form of enrolling providers into health plans. This is the highlight of some of the messages that we heard that certainly the application process for enrollment is unique for each and every health plan and that there are reasons for varying the systems for why the systems vary and there are different reasons why providers enroll or purposes for enrollment, one is enrolling into the health plan network generally, but there's other enrollment processes that providers go through for example, enrolling into the EDI exchange with the health plan, enrolling into

the electronic fund transfer program of the health plan and then other purposes for enrolling in benefits. So, for example, developing provider directories and establishing some of the, I guess information about the providers with respect to their ability to support specific electronic service information. So this electronic service information discovery, which is one of the topics that has been defined by the provider directories initiatives and by the S&I Framework is also one that has benefited from this consistency and enrollment of providers in health plans.

And so there were a number of other messages, the application process is cumbersome and burdensome, and repetitive, enrollment systems are not really shared between entities. And so at the end we started to talk about some of the what can be done next and so messages, what we heard included things like we should consider developing a general framework for enrollment or recommending that a general framework for enrollment be developed, including the definition of the scope of enrollment, there's clearly differences, but complementary steps between enrollment and other processes like credentialing of a provider.

And so there's an interest in defining a general framework for the enrollment itself and then consider perhaps establishing a multi-stakeholder group that can then work on the details of the recommendations and then report those back to us and then to also the Policy and Standards Committee so that the recommendations can then be formulated to the Secretary. So, that's what we heard and the next slide just highlights the main issues on the policy side and the standard side, so concentrate on the standards considerations. Really the questions that we will be looking into are whether there's an existing standard that can be used and/or modified for the enrollment process and whether provider enrollment database can be established and used or if there's an existing one can it be credentialed and then mandated for use. And those are some of the key questions that we heard that relate to standards that would be important for us to look at into the future.

So, again, this is sort of the starting process, the ideas certainly we're not going to come out with recommendations in the next month or anything like that about this, but this will be a process that will probably take some time over the next year or so and the work that we jointly will be doing will be critical in the development of those recommendations. So that's the first topic. Let me go to the next topic and perhaps we can finish up and then go back to the Q&A for any questions or comments that people might have.

The second topic was the applicability of the HIPAA regulations into programs and insurance, other programs and insurance. So the current status we all know HIPAA specifically carves out other insurance types from being subject to compliance with the administrative simplification provisions including auto insurance, worker's comp, property and casualty. So the question was should those same standards and operating rules apply to those sectors of that industry? So what we heard generally was well I don't think we are ready to do that yet. There are some important differences between the health-insurance industry and these other industries. Some interesting points that were made where for example, a claim in these other industries is not what a health claim is. A claim sometimes results from an individual claiming some benefit or coverage from some of these other insurances sectors, whereas a health claim usually is really a message between a provider and a payer.

Also a claimant is not an enrollee as we have in the health-insurance side. So there are some very important distinctions and differences between these other forms of insurance and health insurance. And there are different laws and different work flows and relationships that need to be looked into. There are also, while technically the same standards can be used to submit the information for these types of claims and these type of information exchanges, the current standards do not necessarily fully support or meet the needs of those other insurance sectors and so there were some concerns about being able to simply just apply the current exact same standards of a healthcare claim to a claim for auto insurance for example or property and casualty. Worker's comp might be closer to health claim, but there's also still some other requirements that need to be considered. So, again here the consideration of establishing also a multi-stakeholder policy advisory group that can develop some recommendations was kind of a highlight behind the discussions.

So, the next slide just highlights some of the elements around policy and standard issues and certainly the standard side, primarily focuses on can we really apply the current X12 and NCPDP type of standards for administrative transactions to these other processes of eBilling and so that will be one of the topics that I think we will be focusing on in the next discussions in this area.

The third topic that we covered is in the next slide which was claim edit consistency. So, here the idea was again to try to see if there was any opportunity to create greater transparency and consistency in the methods used by health plans to do claim edits. We heard actually a number of important messages. There is an initiative under Medicare called the National Correct Coding Initiative, NCCI, which currently is really an internal process or internal initiative by CMS applied primarily to Medicare and exclusively really to Medicare. But there was some interest in seeing perhaps that that type of initiative, which really identifies mechanisms to edit a claim when the claim is coming in, in a more consistent way, could be used as a foundation for a much larger initiative that applies to other entities, other health plans and providers.

The health plans did provide some caveats about using it, but certainly that's still an interest and an opportunity to look into that and see if it can serve as a foundation, perhaps. A few states like, Colorado have worked already on establishing standardization of claim edits across the State applying to all health plans in that State and so that's another source of information and foundation for future work. And clearly providers our expressing their frustration with the inconsistencies in edits across all the payers and then some of the estimates show 10 to 14% of practice revenue for managing the claims and claim edit processes, you know, that practice revenue goes into managing this claim edit processing. So again, here another kind of common recommendation came through was to consider establishing a group that can develop this transparent and credible processes, and recommendations on how to standardize the claim edit process.

And the next slide, with respect to standards, a few other points that were highlighted was, for example, the adoption of the coding conventions under the CPT, the current procedure terminology which is really not part of the mandated HIPAA requirements. HIPAA requires the use of CPT, but the coding conventions and the instructions and rules and decoding are not really defined by the entity issuer and so adopting those coding conventions under HIPAA and under regulations could help simplify this claim edit process as well.

Dr. Asif Syed – American Medical Association

Hey, Walter this is Asif Syed from AMA.

Walter Suarez – Kaiser Permanente

Yes.

Dr. Asif Syed – American Medical Association

Quick comment on this, we just finished a project with the Colorado Taskforce that you just described and CMS providing CPT related code edits, so we do have a very clean and clear file now for Colorado and the groups who were involved in that process related to CPT edits.

Walter Suarez – Kaiser Permanente

Okay.

Dr. Asif Syed – American Medical Association

CPT, nothing else. So, that's done and CMS has that product.

Walter Suarez – Kaiser Permanente

Great, that can serve again as additional informational documentation for the next steps on this topic. Thank you. Thank you for that point. So, that's the third topic and then the next slide starts with the fourth topic which is the financial audits and standard forms. Here the point was really audits of providers and plans are unique, and burdensome, and basically the question was whether there were ways to standardized aspects of the current audit activities, can standardized forms apply to financial audits

required by health plans, federal and State agencies and other relevant entities? So, what we heard was that indeed providers certainly are subject to audits from different sources, different places, Medicare, Medicaid, private plans and the requirements and timeframes are in most cases different and this creates a significant administrative burden from all these redundant request and lack of transparency, and cost, and copying, and processing. So again, a consistent message was we really need to work on finding ways to standardize that and again putting together a multi-stakeholder group that can provide some more details on how to proceed with standardization in this area would be advisable.

John Halamka, MD, MS – Harvard Medical School

A very quick interruption. Jon Perlin, I've heard that we have Judy Murphy for two more minutes so might we just get Judy to make some very quick comments from ONC and then go back to Walter?

Jonathan Perlin – Hospital Corporation of America

Walter, if you don't mind, let's do that.

Walter Suarez – Kaiser Permanente

Absolutely, please.

Judy Murphy – Deputy National Coordinator for Programs & Policy – Office of the National Coordinator

Okay, hi, this is Judy Murphy and I so apologize but I'm being inundated in my new role here at the ONC and my time is not my own quite yet. So I would love to be more on time and be able to be more timely. But here's some real quick comments about what's going on and where we're kind of at because I think it's extremely important to set the stage for the Standards Committee.

So, first of all, this is day eight for me so take that for what it's worth. But more importantly, it's really interesting to start seeing things from the other side of the table and one of the things that I have seen numerous times and heard numerous times over my very short tenure here is the overall utmost respect for the work of the FACA committees, both the Standards Committee and the Policy Committee, and taking that to the next level really being an exemplar for a grassroots kind of participative effort so that this isn't HHS or ONC, you know, making decisions, but it's really taking in the collective think, if you will, of a large group of individuals to be able to inform the work that we've done over the last two years and that we're going to have to do in the upcoming years. And that has just been so frequently stated. It's just been absolutely commendable, I guess, so I wanted to emphasize that.

But the point that I really want to talk about is that as we move forward into 2012 here, the standards work that Walter is talking about right now and Doug is going to spend a good chunk of the meeting on, and of course it's the core mission of the Standards Committee is really going to be the focus of our work here at the ONC in that we're kind of moving from the era of adoption, if you will, into the era of standards and that this will be the infrastructure that we need to put in place for the sustainability really going forward of all of the programs. The adoption thing isn't totally behind us, but I think there's a certain inevitability now of electronic health records and of the Meaningful Use Program and, you know, physicians are beginning to see the light, if you will, and going from, well we doubled the adoption of physicians in private practice from two years ago to today, so two years ago it was 20%, now it's 40%. So, you know, that's well on its way.

So really the work ahead of us is so much the work of this group through NCVHS as well as the Standards Committee to really make sure that we put that infrastructure in place that we know that we're going to need. And with that I wish we were all in person actually, because I've so enjoyed my work and I'm going to still stay plugged in along with some of the other folks here. So, thank you very much.

Jonathan Perlin – Hospital Corporation of America

Judy, thank you very much for those comments. I agree with your perspective that there is a degree of inevitability in terms of adoption. I think, just to put a little fine point on it, we're further along in terms of the freestanding health record than we are in all the transport area and look forward to a particular focus

there as well as with interfaces with the administrative requirements of healthcare such as Walter and the team are providing.

Judy Murphy – Deputy National Coordinator for Programs & Policy – Office of the National Coordinator

Thanks, Jon, very much.

Jonathan Perlin – Hospital Corporation of America

I don't know if you have time for any questions or comments?

Judy Murphy – Deputy National Coordinator for Programs & Policy – Office of the National Coordinator

I don't, I'm actually late. So, I apologize.

Jonathan Perlin – Hospital Corporation of America

Well, we thank you.

Judy Murphy – Deputy National Coordinator for Programs & Policy – Office of the National Coordinator

I might be able to hook back in like at 11:30 or so and address any questions at that point.

Jonathan Perlin – Hospital Corporation of America

Okay.

Judy Murphy – Deputy National Coordinator for Programs & Policy – Office of the National Coordinator

Okay, thanks.

Jonathan Perlin – Hospital Corporation of America

So then let's go back to Walter Suarez.

Walter Suarez – Kaiser Permanente

Yes.

Jonathan Perlin – Hospital Corporation of America

And you were on Slide 17, I believe?

Walter Suarez – Kaiser Permanente

Seventeen, yes, exactly, and just so, moving along the next slide, you know, just to finish up on the topic, basically on the standards side with respect to audits we heard from NCPDP the National Council on Prescription Drug Programs that they have developed a series of elements and pharmacy transactions that could help in the standardization of some of these audit processes and there is a number of other areas, certainly related to audits that apply to things like prevention, fraud and abuse that can be approached I guess differently if we had a new set of standards for financial audits. So, that is again topics for the work that will be done over the next year by the National Committee in partnership with the Standards and Policy Committee.

So, the next slide, just to finish up on the topic, basically overall we heard that although there seems to be quite a strong interest in addressing all these topics there is a sense just generally that any formal recommendation at this point is premature in terms of any action or any decision for standards or operating rules or any of those. So basically, I think what will be coming out of these hearings and of some of the recommendations is a sense that we need to put in place some groups that will be able to over the next several months, define in more concrete ways the type of recommended standards that can be seen as ways to simplify these processes and then be considered for adoption across the board.

So I think with that, I'm going to turn to the last couple of slides to talk about briefly claim attachments. So, the next slide just highlights a very important topic that we addressed during those hearings and I want to acknowledge Wes Rishel who was able to attend and participate in person both as a testifier providing just incredible, thoughtful introductory historical perspective remarks about claim attachments to put all those aspects in contexts, as well as his participation as a member of the Standards Committee in the joint discussion with other testifiers.

So, we basically have been following the Affordable Care Act requirement that HHS will be expected to publish rules, final regulations defining the standards and operating rules for claim attachments no later than January 2014 and that those will be required to be in compliance with by the industry no later than January 2016. As many of you know, HHS published back in 2005, a notice of proposed rule adopting standards for electronic claim attachments but really never finished publishing the final rule and with things having changed so much, clearly particularly, you know, this new world of electronic health records and standards for clinical messages, we thought the best way to start was to really go back to convene a hearing and listen to the industry of where things are with the standards for claim attachments and what are the pathways towards defining a standard that can be adopted in the timeframe needed and then implemented by the industry.

And clearly, the single most important message I think that we heard was, and this goes back to my original point of the convergence between administrative and clinical worlds, was that the standard for attachments will have to really be very consistent with the standard that is being defined in the electronic health record arena on clinical messages and so that's certainly something that will be part of the development of the standards and I'm glad to report that's clearly the direction that the industry is taking.

We heard a lot of messages about claim attachments, there's a lot of claim attachments being done today. A lot of them, the vast majority are still done manually. A paper request via regular mail is sent by the payer to the provider to request an attachment of medical documentation, support of medical documentation and then the providers send it back by mail or by fax, or by some other method, but very few are being done electronically. It is expensive on all parts, basically, not everything needed as attachments come from an electronic health record, that was another point that was made, really the EHR is not the final solution...or this, there is still content on this medical documentation, supporting medical documentation that comes from other systems and data from healthcare providers systems.

The information about the pilots and electronic attachments that have been done over the last five years show significant return on investments. There is strong support for adopting a national standard that combines the X12 standard, so called the wrapper, if you will, the envelope and transport mechanism to wrapping an HL7 CDA standard message. So that continues to be really and seems to be the direction that the industry is moving towards recommending adoption of these combined standards.

There is also the need to move incrementally from paper to electronic and from electronic and structured to electronic structure messaging. And as much as possible certainly move towards that ultimate goal of having a structured message that is computational and can be automated for auto adjudication processes, but that there is still going to be a need to consider electronic unstructured messages that will require some human intervention, of course, to read and review those contents.

There is no reason to wait, that was another important message that we can start soon and begin to work towards that path of adopting the standards. There are concerns regarding potential abuse in the number of request for attachments into the future once the now attachment is so "easy" to send because it's all standardized and we have an electronic way to do it that there could be an abuse of request of those so still the goal is to try to reduce rather than increase the number of attachments needed by incorporating data that usually would go into an attachment into the original standard for a claim and that way avoiding the need to request attachments.

And there is a need of course to identify, right away, an operating rule authoring entity. An entity that will be developing the complementary operating rules that will be adopted as part of the standard, that's part of the process that we will be following.

So, the next slide certainly points out to the discussion of the standards and clearly what standards are available for consideration at this point, primarily X12 and HL7, but what are the other types of standards that are available today. And a pretty significant issue, which was brought up by CMS, the Medicare Program through a project called eSMD, electronic submission of medical documentation, was the question of provider signature and authentication options and the fact that in some cases and particularly for Medicare there is a requirement to have pretty much a wet signature or at least an appropriate electronic version attached to any content being sent as part of the supplemental medical documentation. So that's a critical element in the debate of these standards and the adoption of the standards.

So, I think the last slide, the next slide, slide 22 just highlights some of the opportunities for collaboration between our committees. So, I think what we have done at the NCVHS is basically taking the initial steps to address the needs coming out of the Affordable Care Act and have sort of taken the lead, but we would certainly want to and see the need to work with the HIT committees in a few areas. First to identify what are the policy recommendations related to these 4 or 5 topics based on the findings from these hearings. What are the possible standard recommendations and then what are additional areas of recommendations for standardization beyond those mentioned in the Affordable Care Act.

And so the next step we're planning to take is we're going to be drafting a set of letters of observations and recommendations, that's what we, at the national committee, regularly do is draft, prepare letters to the Secretary with observations and recommendations coming out of these hearings and we expect to complete that by January of next year, next month, basically, I guess. And then we would like to distribute certainly those to the HIT committees for input and any questions and we will be happy to come back to the committee and present those recommendations. And then expect to be able to submit those recommendations to the Secretary by February so that then actions related to those recommendations can begin to be taken.

So with that, let me see, oh yeah, I think we have a couple of more slides, maybe we can just very quickly highlight. If you go the slide 25, if you could, slide 25 just talks about the agenda forward for our standard subcommittee. So, we certainly are going to continue to work on the administrative simplification requirements called for by HIPAA and the Affordable Care Act, review these new areas of standardization, look at the new areas for standardization beyond section 10109 for example, first report of injury, electronic signature standards, metadata standards and again, very complementary to some of the work that is being done here at the HIT Standards Committee, e-consent standards, standards for personal health records, and then continue to review and improvement of standards and operating rules maintenance process, the process for maintaining and updating the standards and operating rules in the coming years.

And then the next slide, 26 also a big part of our agenda is going to focus on public-health data standards. So we're going to be focusing quite a bit of work in 2012 and beyond on public-health data standards that are much more encompassing of all the different types of messages, public-health messages including vital records, acute disease reporting, chronic disease reporting, etcetera. The concept of a public-health information technology architecture reference model, basically a concept that looks at helping public-health agencies using an information technology architecture reference model enhance and build their internal information technology infrastructure. So that is another area that we will be working on and then I heard throughout the introductory remarks a lot of talk about model driven activities and CIMI, the Clinical Information Modeling Initiative, that we'll probably hear more about.

And so in public-health there is also the interest of discussing and defining a public-health reference information model and so that will be another area we will be focusing on. So, I think I'm going to stop here and turn it back to you, Jon, for any questions or comments from anyone.

Jonathan Perlin – Hospital Corporation of America

Thank you for a terrifically lucid and I think provocative presentation not only reporting the activities but setting forward an agenda and maybe less a question than a comment and one that perhaps Doug can address as he provides the ONC updates, is that there's a lot of work that is certainly complementary of

the progression of Meaningful Use and the work of both the Policy and in particular the Standards Committee, there is a parallelism in terms of the agendas and is there a way is really my question perhaps, how do we best assure that the timelines of the activities assure congruence at certain key milestones such as Meaningful Use Stage 2?

Clearly, a lot of these issues reside at pay grades far higher than ours on the Standards Committee and in fact are issues that our interagency, even within the Department of Health and Human Services issues about ICD-9 to 10, the aspirations here for administrative simplification and the trajectory, the capabilities of the standards are all things that need to be not harmonized, but truly standardized for the convergence that would be necessary to achieve these goals to occur.

They're all promising and ambitious, and laudable independently, but the real utility is the interdependence. I look forward to provoking some discussion about how the standards process can help to assure that interactivity of timelines and standards so that we end up with really a route with predictable weigh points, but not weigh points that proceed on an indeterminate route. So, with that let me turn to John Halamka for other initial responses heading off our discussion.

John Halamka, MD, MS – Harvard Medical School

And so really you highlight what is a process question, which is that NCVHS provides extraordinarily valuable complementary work to the HIT Standards Committee and so from a Doug and Mary Jo perspective is the process that NCVHS, the testimony, might propose a standard set of X12 or other transaction standards in support of their particular requirements and then those are reviewed by a Workgroup of the HIT Standards Committee per our usual criteria of maturity, implementability, availability of implementation guidance, etcetera and then the Workgroup would offer recommendations and endorsement, and the entire committee would discuss or what is the process of coordination you might recommend?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

So, John, is that a question?

John Halamka, MD, MS – Harvard Medical School

It is.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

So, let me just first thank Walter for his nice presentation and sort of laying out much of the work of the NCVHS. Of note, I did participate in the NCVHS testimonies talking a little bit about some of the work that we've been doing within the HIT Standards Committee and the work that we've been doing within the S&I Framework. I think in some sense we haven't worked out all of the coordination mechanisms, but what to me is clear, is that if we produce or identify a series of fundamental building blocks as you sort of indicated, John, around vocabulary and content, and packages, and services, and we identify what those building blocks are, it seems to me that NCVHS, as they move from paper to structured documents can really start to identify what those building blocks are and hopefully, begin to reuse that so that we have consistency of vocabularies across different packages, that we have consistency of packages when they're supporting the same thing and that the data that gets acquired as part of clinical care is naturally there to support the administrative transactions that are necessary.

So, I'm not sure that we've necessarily identified all the swim lanes, but I think the way you've articulated it, this notion of having building blocks, having a series of recognizable standards that meet these criteria's of adoptability and maturity, and reuse those sorts of things, I think is going to be really helpful and I think we'll work synergistically between the two different committees.

John Halamka, MD, MS – Harvard Medical School

All right. I just want to make sure that we don't have redundancy or go in various directions. I mean, I believe in the past we did have an Administrative Workgroup in the HIT Standards Committee. Anesh

was involved with that and I've forgotten who his co-chair was, but, you know, clearly we can reconstitute an Administrative Workgroup as might be necessary to review whatever NCVHS recommendations come forward.

Walter Suarez – Kaiser Permanente

I think, John, this is Walter, and I think that would be a great idea. Just to point to one element, clearly NCVHS is going to be looking at those fundamental building blocks as Doug and you have pointed to for pretty much all the standards and any new recommendations as those recommendations become much more applicable to messages that build from clinical information, and again this convergence into the future of administrative and clinical is going to make that become much more significant. So, you know, we are very much tied to and in conformance with the recommendations being made by the Standards Committee on clinical messages and then adopted through regulations for electronic health records.

Clearly, you know, as has been pointed out, you know, the data that ultimately results in a claim and a claim attachment comes from the same systems that are used to document the encounter, of course, and ideally there would not be any need to convert, transform or translate any of that information, but just, you know, there will be a seamless packaging of the same information with the same terminology and vocabulary and moving to a different use from the clinical to administrative. So, clearly, NCVHS is very committed to following and building from, and using as a reference those fundamental building blocks.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

This is Mary Jo, I think that this also tees up the final discussion of the day and as ONC takes back the feedback that you're going to give us after that presentation, we can certainly build this issue into our considerations that Doug is going to then pull together and bring back to you later.

John Halamka, MD, MS – Harvard Medical School

Very good, thank you.

Walter Suarez – Kaiser Permanente

And John, this is Walter again, certainly I'll be very happy to help and reconvene this administrative group within the HIT Standards Committee if that's the decision of the leadership here.

Jonathan Perlin – Hospital Corporation of America

Okay, any other comments or inputs on this process work for Walter?

Wes Rishel – Gartner, Incorporated

Yes, this is Wes.

Jonathan Perlin – Hospital Corporation of America

Go ahead, Wes.

Wes Rishel – Gartner, Incorporated

So a couple comments, one, I think the administrative group you're referring to had to do with the requirements for common enrollment at the State level and a particularly tight deadline that was in the stimulus bill with that regard. So, as all efforts do it has areas of overlap and areas of distinction that was much more focused on interoperation during the workflow of enrollment then it was on simply interchange standards. I am a little bit concerned about the public-health information that was in Walter's last slide and particularly the development of a public-health information model, having a hard time imagining the Venn Diagram of what would be the same and what would be different in a public-health information model. Do we have dueling legislation here that's assigning responsibility for public-health information to different agencies?

Walter Suarez – Kaiser Permanente

No. Wes, there's no legislation or regulatory requirement for this, but there is within the public-health field there are a lot of concerns around standardized ways of looking at public-health data and this is not data

just reported by a provider to public-health, this is data collected by public-health through different means including surveys, population based surveys and others. And so, conceptually the idea of just like a healthcare organization provider system, you know, looks at developing its reference information and an information model within the organization to capture and collect and maintain the data within public-health there was that interest of looking at, you know, the universe of data that the public-health is collecting and using and then establishing a reference information model for that as a reference model again, not as a model that would be regulated and required, but more as a tool and as a resource for public-health, and for entities that interact with public-health.

Wes Rishel – Gartner, Incorporated

Well that helps me understand why the Venn Diagram may not be just two overlapping circles because there's clearly a lot of non-patient information in the data set that you described. I would certainly, you know, I learned over the years that the hardest thing to ask the government to do is to collaborate across agencies because it represents a big commitment of manpower to do it. I am very concerned that this activity has enough in the common area of the Venn Diagram that we need a closer approach than simply one FACA creates a proposed standard and the other reacts to it and I'd like to suggest that if the level of urgency in both committees is approximately the same in this area that we find a way to collaborate more closely. Thank you.

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

This is Dixie. I have a question following on with Wes about the public-health standards. How do they relate to the standards that have been, the PHIN standards that have come out of this CDC, is this building on that or how do those two relate? Did they come through NCVHS and ask for more help or?

Walter Suarez – Kaiser Permanente

Yeah, the PHIN standards coming out of CDC, PHIN, the Public-Health Information Network, and the next iteration of a biosense I suppose, are certainly going to be part of this, those standards are clearly standards that are established and used within the public-health system. They relate mostly to data reported from public-health agencies to CDC, as well as in the biosense, direct feeds from healthcare provider systems to CDC. So they are certainly going to be part of this discussion, of course, there's no intent to recreate or rebuild any of that, they will be part of the discussion. Many of you know Seth Foldy who is now with CDC, he is our liaison at NCVHS from CDC and so certainly he will be very engaged and actively involved in this.

Jonathan Perlin – Hospital Corporation of America

Okay then. Any other comments anyone would like to offer on this?

Leslie Kelly Hall – Senior Vice President for Policy for Healthwise

Yes, Jon, this is Leslie Kelly Hall and I did have a question way back on the worker's comp discussion early on.

Jonathan Perlin – Hospital Corporation of America

Please go ahead.

Leslie Kelly Hall – Senior Vice President for Policy for Healthwise

Thank you. You mentioned that there was a gap in worker's comp and overlap with worker's comp in healthcare. Is there an opportunity for us to learn from that group with regard to care coordination and collaborative care? In the worker's comp area they have today a proven model both financially and clinically that manages care with the patient quite active in that effort. And is there opportunity for us to learn from that group?

Walter Suarez – Kaiser Permanente

Absolutely. Thank you for bringing that up. Yeah, that was clearly one of the points that was made that there are already significant, I mean worker's comp is the single largest portion of any insurance side outside of health care, so it's the largest portion of property and casualty within the realm of property and casualty and there is significant work done in different areas and in different states and communities

around how they are handling this care coordination in a worker's comp situation. And so there is yet another point of this convergence of the administrative and clinical world where not only this deals with the claim itself, but also the exchange, the message exchange on clinical care, you know, the message and exchanges of clinical information for care coordination. So, I think that that will be another critical element of this work to be done around how to use some of these same standards in the worker's comp arena, yeah.

Leslie Kelly Hall – Senior Vice President for Policy for Healthwise

Thank you.

Carol Diamond – Markle Foundation

Jonathan?

Jonathan Perlin – Hospital Corporation of America

Yes, please?

Carol Diamond – Markle Foundation

Hi, it's Carol Diamond. I just wanted to follow-up on the question that Wes asked and the points that Dixie raised and ask whether there was going to be some resolution of those questions or whether another process was going to be recommended and the reason I ask is I wholeheartedly agree with the questions being asked because we are increasingly not in a world of public-health is in one silo and electronic health record and information exchange is in another. And I think if we are going to have a coherent approach, that level of coordination and information sharing between the committees is essential and I agree that it's probably not adequate for us to just to hear reports back but that there should be some more active process proposed and I'm happy to, you know, wait until the next meeting to see what people think would work. But I don't want to let that process suggestion fall by the wayside.

Jonathan Perlin – Hospital Corporation of America

Okay, so there's a lot of convergence around the need for interactivity and I personally made the point about the interdependence of timelines at the ideal and the confounding independence even in the implementation with respect to healthcare not just the health aspect. Why don't we take that as a set of comments around a theme, I've heard that a couple of different times, Doug may wish to address later in terms of kind of setting the 2012 work plan, but I think there's a point that has had some resonance around the group.

James Walker - Geisinger Health System

Jonathan?

Jonathan Perlin – Hospital Corporation of America

Yes?

James Walker - Geisinger Health System

Jim Walker. Quick question for Walter. Great presentation, Walter, great work. Has there been any attempt to do a needs assessment to identify the information needs of the various stakeholders in this ecosystem?

Walter Suarez – Kaiser Permanente

Yeah, thanks Jim, great question. I think there's been a number of attempts to identify the needs of various constituents, various stakeholders, not probably a single one, you know, very large one for all stakeholders, but more, you know, what are the needs of researchers, what are the needs of population health or public-health, so there's been work around that, and yeah, you know, perhaps that's one of the things to be done is really to aggregate all that, because yeah I think there isn't a single one that just identifies the needs of all of the stakeholders for all the types of data for all the types of purposes that they might have.

James Walker - Geisinger Health System

Yeah, I think that would really help us to know what we're talking about here to understand, you know, what are the payers needs, all of the different stakeholders, for one thing it probably wouldn't hurt just to have a comprehensive list in the stakeholders so we know what we're talking about.

Walter Suarez – Kaiser Permanente

Yeah.

James Walker - Geisinger Health System

Thanks.

Jonathan Perlin – Hospital Corporation of America

Okay, anything else anyone would like to register before we move onto the Implementation Workgroup?

David McCallie, Jr. – Cerner Corporation – Vice President of Medical Informatics

Jonathan?

Jonathan Perlin – Hospital Corporation of America

Yes, is that David?

David McCallie, Jr. – Cerner Corporation – Vice President of Medical Informatics

Yeah, David McCallie. Just to register a kind of a consistent concern, it's an issue that we've discussed in the past, but in terms of divergence between the clinical and the administrative side, the fact that the administrative side requires ICD-10 from the clinicians, you know, in a more aggressive amount of data capture than in the past probably, whereas on the clinical side we focused on SNOMED for problem statement and definition and I think that issue is going to be a persistent problem once the ICD-10 implementations are mandatory and I don't think we're going to solve it, but I just think that's an issue that we have to watch.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Jonathan, this is Doug.

Jonathan Perlin – Hospital Corporation of America

That has resonance with other earlier comments as well and I appreciate you bringing that forward.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Jonathan?

Jonathan Perlin – Hospital Corporation of America

Yes, please identify and go ahead.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

This is Doug, my card is up.

Jonathan Perlin – Hospital Corporation of America

Oh, I saw it's behind Wes's.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

So, I just wanted to make a comment about, you know, the need to coordinate and particularly around public-health. While I think there is a need for the NCVHS and the HIT Standards Committee to have some degree of coordination at a formal level, I think ultimately the work is going to be done at a much lower level with regard to coordination. And so for example we do have engagement within some of the laboratory reporting from public-health and I think that becomes an area in which we can get resonance

there. The FHA, the Federal Health Architecture, is also working on developing kind of the interoperability portion of the architecture that would be used across federal agencies, and again, that's an area in which we can bring a lot of these agencies together to make sure that we're kind of on the same page.

So I think we can obviously at some point in the future brief about some of those activities. I guess the third one would be around some of the modeling efforts and clearly we've got efforts in developing an informational model on public-health, an information model across the federal health information stack, we've got activities that are going on across non-health agencies that are using...and we've got the recently launched activities around CIMI. So, there is a whole series of initiatives that are ongoing. We are tracking and trying to figure out how to best coordinate that effort, but I think ultimately our success is going to be, not as you say reporting between these different committees, but if we can actually get it down, boots on the ground, the folks that are doing the work to do that shoulder-to-shoulder, I think we'll have a much better success or chance of success than if we wait for things to bubble up to the top before we identify them.

Jonathan Perlin – Hospital Corporation of America

Well said, that's much appreciated and we'll look forward in the work plan to really see what that looks like in a sort of calendar form of activities to assure the convergence. I think that's a good note to move to the next topic because we will dovetail back, there really has been a theme of comments on Doug, your response was extremely helpful and again, will dovetail with your next of activities. But we always seem to give shorter shifts to our colleagues from the Implementation Workgroup. I want to be sure that they have a full opportunity to provide some of the updates on testing that they've been working on. So, I want to thank Walter Suarez for an extremely thoughtful, provocative and detailed presentation that really does identify so many issues that are necessary both to advance the bigger issue about health and value because of all of its connections to public-health and care, as well as the economies of ideally a more streamlined administrative process, but also in terms of the nuances that allowed us to discuss the necessary interactivities and actually programming those so that they are predictable, not unpredictable in terms of their evolution this next year. That's really a theme I think in terms of the sort of rev one on all of our work and rev 2 when we get to predictable refinements or more predictable recommendations for implementation specifically testing. And I want to thank Liz Johnson for her continuing work, acknowledge Judy Murphy's role up to now, and again welcome Cris Ross in his new role as co-chair with great appreciation to all three on the update from the Implementation Workgroup. So, Liz are you kicking off?

Elizabeth Johnson – Tenet Healthcare – Vice President Applied Clinical Informatics

I am here, thank you very much. We'll go through this fairly quickly. We just want to give a brief update on the work that we're doing related to testing. If you'll move to the next slide, please. The group is growing. We have added David Kates from NaviCare and I wanted to assure the group and it was said earlier, as we get into the testing procedures, which are, you know, obviously the next step in looking from the measure to the certification criteria and now how do we test for it, we will be also going to the public and to our constituents to get additional input to ensure that the testing procedures as we move forward are testing for what we're really looking for. So thanks again to this Workgroup. We've already had our first meeting and this group has committed to meeting two hours every two weeks. So much work ahead of us that we look forward to reporting back to the group. If you'll move to the next slide, please.

Can you move to the next slide please? Thank you. So, what we are working on now we have talked about it in the past and we'll continue to work on a grid that when it is complete will consider both the measure, the certification criteria, the changes that are related to Stage 2, the testing procedures and the implementation guidelines, and so now we're into the third phase of that process. And what you see in front of you is a sub extraction from that grid and what we are now working on so let me give you a tiny bit of orientation to it. You have seen this grid before and you will see it again in the March timeframe where we've addressed the Meaningful Use Stage 2 measure, the new recommended certification criteria, and now we're moving into the testing procedures themselves.

What we have done with the Workgroup in our initial meeting is begin to really look at the testing procedures themselves and how can we make recommendations and I'm going to give you more specifics on that, but we are also going to bring back to the Standards Committee and then gather additional information from both the Standards Committee as well as outside what the implications of the recommendations that we're making are. Our input is in the form of advice to Carol Bean and her group and so they won't be formalized recommendations, but certainly have all been through and John Halamka, I always think of you when I think about testing and some of the adventures, shall we say, that you had in testing and bringing your own system to the place where it was certified, so it's critical work that we need to do and needs to be very thoughtful in the process going for it.

Move to the next slide and I'll talk with you very briefly about the kinds of things we're doing. So, as we're meeting every other week to really talk about the testing procedures, here are some of the things that we're examining very carefully. What is the reasonableness of the testing procedure itself? Can it be simplified in a way that it's relevant but still test the meaning of the measure? Is what is included in that testing procedure clinically relevant and appropriate to a clinical setting, because this is about using eventually those measures to improve the quality of our care? Are there duplicative testing going on, are we asking to retest the same functionality in several instances and how can we remove that redundancy?

From a testing procedure, are we actually doing testing or are we asking our vendors to either simply attest or observe that the functionality is in existence and should that be improved upon to ensure as providers, as eligible providers, and eligible hospitals, do we actually have that functionality available to us? Are there testing tools that we've not taken advantage of or testing methodologies that could be employed in the situation that would improve the efficiencies of testing and make it more productive at the end of the day? And can we take certain measures and combine them together and create workflow, clinically relevant testing scenarios where we would be able to really test in a clinically relevant way and prove that the measures would then be useful within our clinical practices?

The second thing that we're going to be doing is we're really going to be asking the group, and this is at their request, and I can tell you we had a very robust first meeting, to really look at the implications of both the testing procedures and the workflows. And although that's a little beyond the testing procedure realm, it is very important to this Workgroup and to our constituents that we began to bring that information back into the Standards Committee so as you've often said, you know, we're the feed on the street and how do you make sure that implementation is moving our mission forward, that is certainly where we're going to be focused.

So we will be getting feedback and input from our stakeholders. We'll be providing that back to the Standards Committee. We'll probably bring interim reports back in small bits. We'll also be engaging Dixie, your group, particularly around the security areas and privacy areas, as well as others, so that when we complete our work, which will be another very large body of work moving this grid through that we've represented all of the disciplines and knowledge that exist in the other Workgroups within that body of work.

So that's where we are and I certainly would take input and there certainly are Workgroup members that are on the phone and I can tell you that's why earlier Wes has joined our group and is actively participating in, and Wes, thank you for other input as well as all the others, but there may be others that would like to add to commentary about what we've already accomplished, where we're going, as well as input from the Standards Committee about the body of work which I've described.

Jonathan Perlin – Hospital Corporation of America

Terrific pragmatic recommendations and the floor is open for any comments.

John Halamka, MD, MS – Harvard Medical School

And Liz, this is John and I do you want to thank you for your work, because pilot testing, whatever you come up with is going to be critical. As folks may recall in the certification criteria for Stage 1 there was the demonstrate encryption by showing how AES and a SHA-2 hash visually work, like, what? It made no sense and it actually, even if you could do it proved nothing. So, we as you point out want to make sure

that the testing is both doable as well as actually illustrates the desired outcome, which in this case should have been can a physician send a secure message to another physician and actually accomplish clinical care coordination?

Elizabeth Johnson – Tenet Healthcare – Vice President Applied Clinical Informatics

Yes, well described and exactly where the guidelines and the principals of this group are moving forward. So thank you for that, John.

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

Liz, this is Dixie Baker. You know, as you said the Privacy and Security Workgroup made a recommendation to significantly change how the certification was done with respect to privacy and security requirements.

Elizabeth Johnson – Tenet Healthcare – Vice President Applied Clinical Informatics

Correct.

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

And I certainly would see that there would be value in soliciting input from key stakeholders on what we recommended.

Elizabeth Johnson – Tenet Healthcare – Vice President Applied Clinical Informatics

All right.

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

So, you know, we'd be happy to work with you in doing that because, you know, the Workgroup felt strongly about the recommendation, but it really has not been fully flushed out.

Elizabeth Johnson – Tenet Healthcare – Vice President Applied Clinical Informatics

That's a terrific recommendation, Dixie, and we will work off-line and then bring it back to the committee.

Jonathan Perlin – Hospital Corporation of America

Other inputs? Okay. Hearing none then, thank you very much and good comments, and I think endorsement of really some very resonant themes notable by the absence of discussion. I think a lot of support for the recommendations that have been brought forward. With that, let me turn to my colleague, John Halamka, to introduce this next and robust section of our agenda on not only some activities at ONC, but moving forward into a framework of activities for the year ahead.

John Halamka, MD, MS – Harvard Medical School

Well, great, thanks so much. And so we'll hear all about Query Health and folks, I wrote on Monday a blog post looking at the whole notion of sending the question to the data instead of sending the data to a registry or repository. And as Doug will outline, there are many regional efforts already in progress to do this, so putting together a single consolidated national plan for distributed federated data mining is a very good thing and will consolidate multiple other disparate efforts. So we'll hear about that and then the S&I Framework remember includes transfers of care, lab results, provider directories, Query Health, data segmentation, and the sending of documentation to Medicare reviewers, and the great news today we'll hear updates but also project plans and look at Gantt charts so that we can ensure that our work that we'll plan in FY 12 is directly supportive of the S&I Framework, and to the point that was made in the discussion with Walter that it is very tightly coupled coordination. So, with that launch ahead, Doug.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator - Director, Office of Standards & Interoperability

Thanks John and Jon. We'll actually, to just let the Altarum folks know, that we'll sort of control the slides as we go through this next series of presentations. I will say that we have a lot of slides to cover. Many of these are, I think, there to provide background materials and, you know, over the holidays to make sure that as people get bored with their eggnog and they need to have just a little bit more reading that we have the kinds of materials that will, you know, really make your holidays bright.

So, we've included all of that stuff in here, what I'd like to be able to do is do a relatively brief guide around Query Health. The thing that's important with Query Health is that this activity has really I think identified a tremendous number of touch points and surfaced a whole series of issues that are not even just specific to Query Health, but have implications for how we look at quality measures, how we think about clinical decision support, a whole series of things. And I wanted to make sure that we got that out in front of folks. I'll then want to do a little bit of work kind of going over some of the things that we've got into our current S&I Framework activities just too sort of remind people of where we are and kind of what our timeframes are for making good on our promises to deliver particular activities.

And then I hope that we have the bulk of the time to be able to queue up what is it that over the course of the next 12 months or so we can focus our energies on that will be most helpful in sort of moving the country forward and creating our portfolio and our building blocks that will help support information exchange. I've put some things down on a slide just too sort of get your creative juices going. But in fact, we I hope will be able to spend some quality time talking through what are some things that are missing, what are the things that we need to prioritize and I will be at that time not talking but taking copious notes. So, let's go to the next slide here.

So when we think about the things that we do in my office, enable, curate and enforce, we're going to be talking about enabling and the curating piece of this in the sense that we're going to focus on the Query Health activities and the S&I Framework, but then what we will also spend some time on is some of the things that we're doing to create that one-stop shop. We heard from this committee a number of months ago that there was a need to have a way of accessing many of these activities and many of these resources in singular focus. We have begun the efforts of taking the artifacts that are coming out of the S&I Framework and putting them in a repository trying to figure out a way to access that effectively, working with our partners at the National Library of Medicine to help us create a mechanism to access value sets, to identify those and things like the lab compendium is an important aspect that as those kinds of resources get created, what becomes important is that we have a way of curating those and managing those over time. So let's go to the next slide here, Rich.

So, we're going to provide an overview of Query Health. We're going to talk about the S&I initiatives. We're going to talk a little bit about some of the tools that we have within that including our repository work and the work that we've been partnered with, National Library of Medicine, and then I hope give us an opportunity to get feedback and guidance from this committee about what should be our priorities for the 2012 activities. So with that, I'm going to turn things over to Rich Elmore who's going to talk about Query Health. I think, again, in all of these we've got a lot of slides that have a lot of material on it. We may not be able to go in-depth with all of these, but these slides are publicly available both to the public and to the community and we hope will help us by providing that information, provide us the best guidance for how to proceed. So, with that, I'm going to turn things over to Rich.

Richard Elmore – Office of the National Coordinator – Query Health

Thanks, Doug. In addition to the great post that John referenced earlier there was some early work by Wes in this same area that was influential in terms of how this project has been defined and we've gotten terrific feedback from other Standards Committee members including Arien, Cris, Carol, Jamie, Stan, David, Marc, and Jim, and many other organizations that are represented by folks that are part of the Standards Committee. So thank you all for that and again, a lot of the work that I am going to be reporting on here is a result of terrific community participation, kind of a cross spectrum and we just have some terrific Workgroup leads and Workgroup participants that have really guiding and driving what we've been doing.

The idea here is basically to give everyone an overview, some of you are more into this already than others, but we want to make sure that there's a level set there and really the purpose today is to be able to confirm our proposed technical approach and our proposed standards and specifications, and this is of course subject to capability and pilot feedback, all of which are still in front of us. So, we are at a stage in the project where we have finalized use case and functional requirements. We have up for community

consensus vote, as we speak, the technical approach and standards to go with it, and that's what we'll be talking about today.

So the idea here is really to enable a learning health system to be able to understand population measures of health, performance, disease and quality. There are lots of different aggregate measures that are possible, those are some of the highlights, while respecting patient privacy. So the idea of a distributed query is that you can, you know, keep the individual level patient information behind the data stewards firewall yet get access to the aggregate information that you made need for a variety of purposes in order to improve patient and population health and to be able to reduce cost. So, that's our guiding vision and, you know, really the focus on the patient is central to this.

Distributed queries really unambiguously define a population from the larger set and provide some information around it. And the questions that can be asked might be going to a storefront clinic, they might be going to a health system, and they could be going to a payers clinical record as well or an HIE's clinical record as well. Basically, a question to any clinical record that can return an aggregate result, it might be able to answer a question about a disease outbreak or a prevention activity, or something that would be important from health research or comparative research, quality measures, performance measures and so on. And I think this is kind of the point that Doug was talking to earlier. I don't know if you want to elaborate any, Doug, on kind of the connection beyond Query Health?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Yeah, I think this was one of the insights that the Query Health Group has already sort of identified that when you ask a question of a larger data set you're basically trying to define a subset of a population that meets a particular definition from that larger set and although Query Health has really tried to have singular focus on how to do the analytics and distribute the question to where the data is, that insight, I think, has significant implications for things like clinical decision support where we try to identify a subpopulation and the applicability of a rule or an intervention, or even quality measures in which a quality measure is really trying to identify a numerator and denominator gone from a larger population as well. So, this has been an important aspect of things and although there is a singular focus on sort of this distributed query, I think what is being learned here has broad applicability that we will have to take back and figure out how best to apply.

Richard Elmore – Office of the National Coordinator – Query Health

Thanks Doug. So, the overall approach is consistent with other S&I Framework initiatives so it's open government initiative taking our guidepost guidance from both the HIT Policy Committee and the HIT Standards Committee through a public-private partnership to be able to determine the standards and services for distributed population queries, and as I mentioned to be able to do that, not only for EHRs, but also for other clinical records. And the idea is that, you know, practice drives standards rather than vice versa, so we're really at the stage where we have a rough consensus, you know, subject to this committee's input as well and we're starting the process of developing the reference implementation, which will be based on running code approaches to distributed queries that already exist in the real world. We're going to be piloting those and from that we'll be drawing what we think are the right recommendations in terms of both specifications and standards. So, that's the basic set up of the project.

And there are 3, rather 4 actually definitions, but 3 to kind of keep it simple, 3 parts of the use case. There's the what data, there's what question, and there's, you know, what result, and really it's that simple. We want to make sure that we're able to do that on a distributed basis as opposed to on a centralized basis and the important point is that query execution and results distribution remain under the control of the data steward. So, it's an important point of view in terms of patient privacy that we've maintained throughout this project.

Another notion that's important is to make sure it's clear that this is not, you know, a centralized database in the sky. This is very much a distributed question going to clinical data services, returning an aggregate result without jeopardizing patient level information. And the idea is that there are distributed query networks that are voluntary. There's no central planning intended, there might be different kinds, it won't

be top down, it won't be, you know, government providers, although that's one potential application of this. We expect seeing other models in the country like the HMO research network where there's payers and providers collaborating and so on that there were be multiple of these virtual networks where requesters will be able to ask questions of participating responders where they have voluntarily assembled for a particular purpose.

We started the entire project this August with what we call a summer concert series and we got feedback from a number of the folks that are doing distributive queries today. There is some terrific work going on across the country. We're not going to try and recap any of it here but I think it's important to say that folks that have done this really think about this problem differently and have insights and they have guided us along the way that has been extremely helpful in terms of making sure that we were centered on what's important and what are the important problems to be solved as we go through this. There are a lot of challenges with distributed queries and they've created focus for us that's been critical to the progress so far.

The user stories are focusing on the clinical record. We believe that this is extensible to other kind of data sources, but our initial focus is on the clinical record. And we have two user stories. One, is a generic one and that is the idea of a general distributed query and the idea that a question that you want to be able to ask ad hoc that you can ask of that clinical information. And we may not capture everything for every domain for every question, we won't, but we wanted to be able to be complete in at least one user story. So, we have this notion of an expanded analysis of diabetes and the idea there kind of follows from the cluster approach of being able to look at a large number of measures around a disease to be able to know that if you throw a particular lever to be able to try and improve the health of a population that you can see how it's being influenced in terms of the individual measures associated with that disease. So we'll get into that a little bit more in a minute. That's the two user stories, the kind of the general purpose one and then this expanded analysis of diabetes that will be part of the pilot work that we'll be doing with the Query Health Project.

Generic user story in action just to kind of make this graphical. The simplest path is from data source to information requester, as you see across the top there, kind of starting on the right and then going to the left and then the information requester will send the query data back. Now there are a number of examples where there might be a need for an intermediary. Now that intermediary might be there for example in an HMO research network case where providers are willing to collaborate with payers but want their organizational identification obscured, so that has to be done through a trusted intermediary. So we've left open the possibility of a trusted intermediary in the query network to be able to enable, you know, flexible and appropriate use of the kinds of approaches of distributed queries that we're seeing being used around the country. And specifically for the standard analysis of diabetes and action, it will be direct from the information requester to the data source and back.

So looking at that, just drilling down a little bit, you know, this really starts with the EHR or the clinical record being able to get that information into a Query Health Data Model, which is the foundation on which a question can be asked. A question comes in from an information requester, it comes behind the firewall to the responding organization you can imagine we're showing one responding organization, there could be many. There is an execution done against that query with a format and return of the results and those query results are sent back to the information requester from the responding organization, patient data staying on the right-hand side, aggregated data coming back on the left-hand side to the information requester.

And, you know, just to give you visually kind of what kinds of information are being thought about for a distributed query. This is the expanded analysis example result set for diabetes. It gives you kind of an example of kinds of information that might be asked in a query or set of queries that could address this. Down the rows you see some risk scoring, some traditional quality measures, eye exam, foot exam, medication categories and so on, and then some denominator counts and so on for that information below. And then it is all stratified according to various demographic factors like gender, age, you know, zip or partial zip setting and so on depending on the domain and the way the question is being asked and

the kind of information that will be coming back. So, that is an example result set of the kinds of information that we might be trying to get at with a distributed query.

The clinical element data dictionary is work that was originally done with the transitions of care project within the S&I Framework Project and this has been good foundational work, it has been very carefully developed. So its standards, independent and, you know, it's a simple kind of 2-D abstraction of the data that you might find much of it in a CDA or any other data model. And so, that it's our way of being able to define this in a way that is neutral, the data that will be required and then there will be physical implementation of that as we get into the project and into reference implementation, but we tried to start at a level that wasn't tied to a particular modeling approach.

So that clinical element data dictionary is going to be leveraging the best practices that we've seen from a distributed query work that has been done already. We've gotten a lot of feedback from on what should be in there with the clinical working group that is working on the content for that and extending a clinical element data dictionary to include what we believe would be appropriate requirements for Query Health for distributed query networks. And this is the process map of the steps we are going through for that. I'm not going to drive through that now, but here are some of the key building blocks that came out of the functional requirements for the generic, user story, these are some of the areas that we wanted to consider as part of, you know, the base capability of a data source field to provide this kind of information that we could ask questions against.

The second subteam is focusing on clinical concept mapping and you know, it's a challenge today that there is not, you know, a standard way in which we have a consistently computable clinically intuitive way to be able to ask questions at a concept level and to be able to get appropriate answers back and so there is a lot of good work that has been done out there on this and what we're trying to do is to be able to draw on that good work to be able to figure out how we want to be able to apply clinical concepts to the kinds of questions that we want to ask. There are a lot of challenges in this area, folks that have been working on distributed queries find this as one of the toughest areas, I mean there are questions about, you know, where the concept mapping should be done, you know, whether it's on the requester side or whether it's on the data provision side, the linkage to the coding that is actually being used by the data source system, how values are described across system.

You know, I was talking to Shawn Murphy yesterday at Partners, he was talking about the example of whether you use red or blood it can mean the same thing and we have to be able to figure out how we're going to be able to line up to be able to ask questions. So, this team is doing a lot of work that is progressing to, first of all doing an environmental scan to really understand the ways in which this is being done out there now and to come up with some recommendations for distributed queries. Again, here's a workflow of how that is doing. I would just point out that, you know, we think some of the work that is coming out and some of the SHARPn work, NLM, CDISC SHARE, you know, some of the CIMI work as well may be influential in terms of what we're doing in this area, so I'll look forward to their progress when I see them over the next couple of months.

I wanted to mention briefly some of the operations challenges. What we heard loud and clear from the summer concert series was that the hardest part of this wasn't going to be the technology it was going to be the policy and governance. We have a team that is really looking into this, really trying to drive the work. They're beginning to focus now on a sample of data use agreement and templates for that, and policy implications for the use of an HIE as a data provider, and other opportunities to lower costs to establish query networks to run queries, so there is some good work proceeding in that area.

In particular, we spent some time earlier this fall with the Policy Committee and with the Privacy and Security Tiger Team to get their guidance on what we're calling a policy sandbox to make sure we stay inside of appropriate rails for patient privacy considerations. So here are some highlights of that, control of data disclosures by the data holder, that means they are deciding whether or not to run a query and whether or not to release results, and whether or not results need to be blurred. We're being clear about what data is allowed to be disclosed. We're saying that there should be a data use agreement whether it's de-identified, whether it's a limited data set or not, the data use agreement should be in place with no

re-identification, clarity of purpose for which the queries are being run. Also, there is some concern about, as you get into smaller cells, whether or not that could create opportunities for re-identification, so we set some limits there, where some blurring of information would be required.

Turning now more to kind of the technical front and then moving quickly into the standards, I wanted to just briefly walk you through the abstract model. Now this is the query lifecycle and this is where the technical workgroup started. They tried to abstract from what they heard from the summer concert series and try and get at the essence of what a distributed query looked like. So, it starts with a query builder, may or may not start with a query builder, but let's assume that it does, which eventually is going to be passed to an orchestrator who is going to be sending the request to a requester agent, who is going to be sending that request to a responding agent with a source data and then a result will be returned back to the requester to an aggregator who will be taking responses back from multiple source data respondents and then being able to send back that information to the authorized requester. So, again, I'm trying to kind of give you the high-level through this. We're not going to go into a lot of the detail on it, but that gives you a high level view of how it's working.

Now the important thing to note in that is that there is a level of abstraction, there is kind of this notion of an envelope with a query that is query type data agnostic and so on and that was an important concept I think that was very helpful to us as we tried to figure out how we wanted to do standards and how we wanted to make sure that this was extensible and usable for multiple purposes and I think that the group did some fine work in this area.

So, in getting back to the idea of where we're going to be making recommendations on standards. Basically, it's number one for the query envelope to be able to package queries along with the metadata required for security and policy enforcement. Secondly, the query format to express queries in a declarative format, and we'll talk more about that in a minute, a results format to be able to express the results in a declarative format, and then the fourth element is the common data element definitions that will facilitate the queries across organizations. There is, up for a consensus vote right now, a Query Health technical approach document that is referenced here, it is probably for those of you that are interested in this, it is worth a read, it's an excellent piece of work.

So, that's what we're trying to accomplish is to be able to in a standard way have an envelope to be able to package up a query and send it, to be able to have a basis on which the question is being asked, to have a basis on which the information is being returned, and to understand what data.

So, I'm going to skip this chart, but it is there for further information on those specifications and standards. I'm going to skip this one as well but here you can see for each of the interactions where the applicable Query Health specifications apply against the abstract model. And I'm going to come to our reference implementation, which I think will be a little more concrete, a little bit easier for you to kind of sink your teeth into. So, this is not, you know, the standard per se, but the reference implementation will be using the recommended standards. I will try and weave together the standards we're recommending and the reference implementation approach that we're talking about.

So let me start out by talking about PopMedNet. PopMedNet is a tool that is used in the FDA Mini-Sentinel Project, it is used in the HMO research network, it's used in the MDPH net challenge grant work that is doing clinical queries against multiple FQHCs in the Boston area, really good work. They are a policy enablement engine that has really thought through how this works on a practical basis with multiple participants who may or may not trust each other but want to collaborate that have particular needs to be able to have control of their information in terms of controlling the requests, you know, what requests are going to be processed, what information is going to be returned and so on and they've done just some really good work in this area.

So, from a reference implementation point of view we think that the PopMedNet work really uniquely serves a role as a policy enablement tool kind in the heart of the way in which questions are asked and answered. And what we've done from the point of view of reference implementation and this is all just work now getting underway, is to ask a couple of distributed query tools that are out there being used

today, the i2B2 tool and then another tool that's well along in development, the hQuery tool, which have some very unique and very interesting characteristics for distributed queries, to be able to plug into PopMedNet with the standards that we're going to talk about in a minute, to be able to get at data sources and to be able to then get back results using those standards.

So, we're trying to use existing distributed query tools throughout so that we have running code as a starting point and then applying the standards to them. And we'll talk a lot more about an HQMF in a minute, but, you know, I want to kind of call out Keith Moon for just some terrific work on this. We have, I think the best technical workgroup ever assembled in Health IT and they are just doing some terrific work. Keith singularly has spent time trying to figure out how we can come to a declarative approach to asking the question and that's critical because it deals with a number of otherwise security issues that we would have had to face if we were thinking about SQL or if we were thinking about JavaScript, which were some of the other options that were on the table. And in the process he had to go through a whole exercise of figuring out not only how do we do that in terms of a question decoration, but how do we simplify it so that it's usable in practice for many different technology stakeholders that would have to deal with that standard and then also how is it possible to be able to translate that question into something that is workable from a variety of different perspectives. Can it be translated into SQL? Can it be translated into XQuery? Can it be translated into JavaScript? I mean, there are a number of different ways in which is it possible to be able to apply this question?

What we found was, through his work, was that we could take the e-measure format the HQMF format, which is basically, you know, a population measure kind of format and be able to use that as a way of framing the question. Now, I want to make it clear that we don't necessarily think that this is the way a researcher would ask the question, we think the way the researcher would ask the question is they'd go into the i2B2 query builder and they'd use their graphical tool, and they'd, you know, kind of pull around the data that they want and they don't want, and the exclusions and the things that they need to kind of get into their query and then i2B2, because it is already dealing with XML, looks like, and this is subject to feasibility, looks like it's going to be a fairly easy progression to be able to take that into an HQMF format.

So, we can then use HQMF as a standard way in that abstract and that agnostic, query agnostic data type agnostic envelope to be able to pass that question to the data source system on the back end where there is a procedural translator from the HQMF to various execution engines i2B2, hQuery or whatever. This could be implemented separately by each of the health IT vendors or it could be done by other hospitals that have built their own systems as well to be able to accomplish this.

Now, on the return, the return is much simpler, right? There's a lot of logic in being able to ask the question, get it translated, then getting it translated into something that's procedural that can be executed, so that's really a critical wish pin to this. The return is really a conveyor belt kind of return of data. So, we think that's somewhat simpler. We believe that QRDA Category III, while not yet a standard, not even yet at a DFT stage is the right kind of definition that with additional work can be the standard by which we are able to return population information back to the requester or maybe through an aggregator so that it can be viewed visually along with other distributed query results.

So, what I want to emphasize here is that the standards that we're talking about for sending the question and then for sending the result back are both kind of HQMF next and QRDA Cat III next. There's work to be done on both of those to make them simple enough to make sure that we have enough implementation guidance, you know, and they're both new or in QRDA's case it is not really there yet. So, you know, I think that there's a lot of opportunity for us to be able to use this, to be able to drive, you know, needed improvements that you would expect to find as you work through any new standard to make it more efficient, more simple and so on.

So, I want to also point out that while HQMF is ultimately RIM based, that the data sources and the people asking the questions don't need to know anything about RIM and some of the simplifications that we're going to talk about that we see as possible here I think eliminates some of the general questions expressed around RIM in other standards of discussions. Just getting into the health quality measure format for a minute, the idea is that it is independent of the implementation data model, it's a declarative

format. For the exercise that was done by Keith, he used this simple information model, the one that we'll be using with Query Health won't be that much more complex and this still will have the kinds of CEDD data elements that we talked about earlier and it is also independent of the data storage model and independent of the execution model as well, and of the vocabulary. So, these are all kind of critical concepts that allow us to be able to come up with something that is going to generalize and something that is going to be usable across the diverse platforms and capabilities that we have in terms of implementation of clinical information in the country. So, some important characteristics.

Keith's work on using business names in HQMF which are being done today indicated that we could get some pretty significant reduction in file size, some limited reduction in line counts and really do a great deal in terms of readability. Greening has more significant impact, that really has to be lined up with other greening efforts, so it is viewed as kind of a longer-term, but a good step for us to kind of keep in a longer term plan.

This is an important slide in the sense that we want to make sure that the implementation guidance ensures that we have, you know, simple implementations of HQMF. Now, the work on the measuring author tools that has been done as diagramed here on the left, is seen as more complex than something that was hand written with the same semantics which is what you are seeing on the right. Now, I don't want anyone to misunderstand, I think that the measuring authoring tool, which is just developed is an important piece of work and this just indicates that there is some additional refinement that we think can be accomplished to improve simplification and improve usability from a technical perspective in terms of these HQMF standards. So that's really the point here and some of that simplification may come from the implementation guidance that we need to provide to support HQMF and support this project.

So, the next steps really are to define the amendments to simplify HQMF and develop the implementation guidance for the use of HQMF. Obviously, we talked about the need there to begin to accelerate QRDA Cat III through its process to DSTU and make sure that we have that as a standard way back. Until we do so, the results can be viewed in simpler ways. So it's not a showstopper for the project but it would be more ideal if we had a way in which results viewers were able to say I know what to expect here's where it's going to be, here's how I can display it more elegantly. So that is the background and at this point, I'll turn it back over to Doug for any recap points and to the committee for questions and comments.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

I'm just going to say thanks, Rich for all the work that has gone on and all of the members of the team that have supported this and I think, as you said, I think we've got tremendous expertise and a technical group that are trying to tackle these really challenging problems.

John Halamka, MD, MS – Harvard Medical School

So this is John. Rich, I just have one question, which, you know, maybe beyond the scope of our discussion today, but we've done many distributed query federated database approaches at Harvard, the i2B2 approach and they work extraordinary well. So, your work is, I believe going to be very important for the future. The one place it falls down in quality measures is that if you have an individual human in different disparate federated databases you tend to double count them in denominators. And I'm sort of curious if this is something your group has discussed?

Richard Elmore – Office of the National Coordinator – Query Health

Yes. It's actually from the beginning of the project; we had defined the scope to assume that will happen. That we are doing this work at the level of a clinical record and so to the extent that what we want to do is to eliminate the duplication of patients, that we would need to look at ways in which for example an HIE who may have a longitudinal view of that patient and does that kind of patient matching as part of their operational capabilities could become a data source and a way of trying to remove that issue where that is important. If the question being asked is, you know, all I like is occurrences in the last week and its directional information and it doesn't matter so much that they appeared at the ED and also at their local practice you want to know kind of what the trend is, then not so much of a problem. In other cases it may be a very big deal.

An epidemiologist doesn't care inpatient, outpatient they care about the patient and so we think that, you know, the appropriate data source for the question is an important part of the consideration.

John Halamka, MD, MS – Harvard Medical School

Right and I completely agree that this is a very good enough approach, it's not perfect but it's a start. Any other questions on this presentation?

Carol Diamond – Markle Foundation

John, this is Carol Diamond, I would just comment that this issue is a very good issue for a research agenda and I know that there have been some arch funded efforts with some of the implementers that Rich mentioned to look at technologies that can match records into disparate databases without requiring either to disclose the identity of whose in their database and I just would just say, you know, I am certain that this group will identify a variety of research issues that can start to look at some of these technologies that are out there and potentially being used in other sectors.

John Halamka, MD, MS – Harvard Medical School

Right and I highly recommend to the group the work of Jeff Jonas, now at IBM in doing exactly what Carol has described. If we hash a name, gender, date of birth combination it is conceivable that you can match identical or similar hashes without having to understand who it is you are hashing.

Richard Elmore – Office of the National Coordinator – Query Health

And I would just add that there are probably some policy considerations on that as well so that we want to make sure as we look at that that we are looking both on the policy as well as the technology side that influenced us to say we can certainly accommodate this within a health system where there could be some matching going on and there is kind of a centralized view from the health system that we are querying against, but that we felt that given kind of the current state of policies that it would be challenging to try to go beyond that.

John Halamka, MD, MS – Harvard Medical School

Very good.

Stanley M. Huff - Intermountain Healthcare

John, I have a question.

John Halamka, MD, MS – Harvard Medical School

Yes, please?

Stanley M. Huff - Intermountain Healthcare

Hi, this is Stan, was somebody else ahead of me?

Jonathan Perlin – Hospital Corporation of America

I thought I heard Dave McCallie, but Stan go-ahead.

David McCallie, Jr. – Cerner Corporation – Vice President of Medical Informatics

Yeah, I'll come second.

Floyd Eisenberg – Senior Vice President of Health Information Technology - National Quality Forum

And this is Floyd if I can come third?

John Halamka, MD, MS – Harvard Medical School

Okay. So we have Stan, David and Floyd. Stan?

Stanley M. Huff - Intermountain Healthcare

Thank you very much for this presentation and you know this is exciting work. I have questions, you know, and I realize you're in a difficult situation here, you know, in this kind of committee to expose the right level of detail versus not getting into too many details, but yeah it would be interesting to know, you know, some more of the details about how this really works. At some level I understand what's going on, but I'm hearing words that say, you know, the queries are sort of expressed in human language or business terms and, you know, that implies that at some level before you get to the actual physical query against the database there is a translation from that general term to very specific terms and it either seems to me then that we are implying some, you know, each institution doing their own interpretation of the general language in order to come up with the things that work in their institution to do this and if that's true, you know, I think it works, but we would need to understand the manual nature of that and whether it's sustainable.

So, I think two things that I would say. One is, you know, I'll look forward to learning more and to understand and I may be misunderstanding the way that it's done, but second I think it would be, as I think we have indicated with other issues, it would be really important in this particular case to do some early prototypes against, you know, institutions and maybe even especially institutions that weren't involved in the initial design to see, you know, how this really works and what's required of the institutions that are receiving the queries and executing against their databases. You know, I think we'll learn a lot trying to actually do it as opposed to just designing it.

Richard Elmore – Office of the National Coordinator – Query Health

Yeah, we're totally with you and, you know, that is our next step really is we're beginning to build out a reference implementation based on this approach and our goal is to be able to actually be able to demo and pilot it and we very much view that trying to get this right and precise is critically important and manageable. These are all going to be critical steps to the first part of 2012.

John Halamka, MD, MS – Harvard Medical School

Very good. So next, David?

David McCallie, Jr. – Cerner Corporation – Vice President of Medical Informatics

Yeah, first Rich thanks for a great presentation and congratulations for the progress that you and your volunteers have made, it's very impressive, but in line with Stan's comment about the concerns on, you know, loss of fidelity or loss of precision in the translation of the data elements and their names and stuff, I also have a concern that you and I have discussed off-line, but I'll just register it in public, a concern that we be careful to keep track of any loss of expressivity on the logic side not on the data element naming side, but on the logic side, by these various layers of translations that have to go back and forth between builders syntax to query HQL format to an SQL format, and then from that back to a QRDA format, and then back to something that the end-user can assimilate, that, you know, you either have to worry about loss of fidelity in the logic or in constraints of what you can actually express in the logic by going through these multiple translations, and I know the team has thought about that, and worked on it hard and, you know, the proof will be in the pudding, but it's a parallel concern to the one that Stan raised.

Richard Elmore – Office of the National Coordinator – Query Health

I'll just second your point, David, I think that's right on and I think it's really important as we kind of get into this next stage of the project.

John Halamka, MD, MS – Harvard Medical School

Very good. Floyd?

Floyd Eisenberg – Senior Vice President of Health Information Technology - National Quality Forum

I want to also compliment you on the presentation and the amount of work that's done and I have also been following much of what Keith has been posting, Keith Moon, and I think it has been very valuable. I just wanted to make a couple of comments. When you showed slide 32 I think it's a bit challenging because you're looking at a measure that was defined for basically abstraction or attestation and was re-expressed based on a measured stewards requirements as is and necessarily that will show more

complex logic. It's not the ideal way to do this, which is the indication that if you're looking for something in a record think about what should be there and design them up front, we should not be looking at retooling and I think you showed a good example of what that does, it makes it more complex, going through 113 of those last year, I can attest to that.

So I think the issues are thinking really at your queries of what you need. I think we've also noticed some complexity in HQMF that you're expressing some of that makes even the retooling somewhat more complicated. So I'm glad to see that moving forward. But one of the issues in line with what Stan and David just mentioned, we also have noticed that in measures sometimes there is additional metadata and provenance that is needed at a data element level that goes beyond what's at a document level for instance. So, if we're looking for measures of patient engagement and patient reported outcomes we'll really need to know more detail that the outcome reported, the source was the patient at that data element level and so without those additional elements it's going to be difficult to get the queries at the level that a measure developer or what policy committee is coming up with will need.

We also have data elements that relate to other elements and if the queries don't reflect those relationships you won't be getting the same data out. So, one we do need to relook at how measures are defined but we also have to look closer at some more detail that we'll need about the elements that your getting on the queries. But that's not a negative, I think it's a good thing what you've done. I think we just need to look a little deeper.

Richard Elmore – Office of the National Coordinator – Query Health

Yeah, Floyd, I mean, I think you're just making public my 3 a.m. nightmares about this project, so, you know, I think that the work that you've done has been outstanding work, you know, and I think that to see it now as kind of being able to be applied in these maybe unintended ways, I think it's pretty exciting. You know, I think that the possibility here that we've figured out a path, kind of getting back to also some of what David was saying, that may allow for the translation of HQMF into something that is procedural if we can maintain precision. It would be a huge win for Health IT stakeholders. I mean, generally, I mean it kind of increases the utility of HQMF by an order of magnitude I think.

Floyd Eisenberg – Senior Vice President of Health Information Technology - National Quality Forum

I would also say if you can simplify the RIM patterns that we have been using and find easier ways we're right with you.

Richard Elmore – Office of the National Coordinator – Query Health

Yeah, and we'll look forward to continuing to work with you on and that and thank you very much for your comments.

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

I have a question, this is Dixie.

John Halamka, MD, MS – Harvard Medical School

Please Dixie?

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

Yeah, Rich this was a great presentation, really very, very exciting work. You said in your presentation that the cells that had fewer than 5 observations would be blurred by methods that reduce the accuracy, you know, to mask the identity. Does your team envision like a trusted intermediary possibly being one of those methods to make sure that a better response does reflect a large enough size sample, you know, to avoid inferring identity.

Richard Elmore – Office of the National Coordinator – Query Health

So, we're expecting that this work is going to be done by the data steward and there are various ways in which it could be done. I mean, the i2B2, you know, I kind of kidded Shawn Murphy and Zak Kohane that only at Harvard could you end up with a...and blur, but that's what they've done so you can kind of get the

standard deviations away from and you can specify how many and all of that. So, they can get very precise in the way in which they can kind of blur that data. PopMedNet has a way to be able to blank out information or I think otherwise adjust that information so there are technologies, techniques that already exist in the working products that we're talking about that can do this for the reference implementation. Our expectation is that this is a data holder responsibility. There is an interesting question about what happens when that information is being held by an HIE and that is some work that is in front of us for the operations group and for some of our ONC policy partners to try and figure out how that is going to work.

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

Well that is what I was implying that you could avoid blurring the accuracy of the result if you had like a trusted HIE that would combine, you know, combine responses from multiple institutions so that the sample would be large enough that you wouldn't have to blur.

Richard Elmore – Office of the National Coordinator – Query Health

Well you could do that if the HIE was a data source. You wouldn't be able to combine a measure from one clinical record with a measure from another clinical record, the map wouldn't be meaningful. So, it has to be done at the data source.

Wes Rishel – Gartner, Incorporated

This is Wes.

John Halamka, MD, MS – Harvard Medical School

Yes, Wes?

Wes Rishel – Gartner, Incorporated

First of all just enormous admiration for the work that is going on and I might reinterpret your 3 a.m. nightmare, you know having been fully trained in psychoanalysis, that you need to arrive at something that is simple enough to be implemented across systems that aren't as highly structured in terms of informatics as has been the case in some of the models that you've been using in going in and you need to sort of create a series of accomplishments that over time add precision in the ways that Floyd was describing. You mentioned pilots and prototypes in a response to, I think it was Floyd, which I think is a good start, but I didn't hear what was the magic word for the direct project which was early production use and I think that we all know that pilots and prototypes have a tendency to meet deadlines by sweeping details under the rug. Live production doesn't have that option. So, I hope you will be able to find settings that are perhaps lower in scale but involve actual use somewhere including systems that are commercially in use for electronic health records but not necessarily being used in academia.

Richard Elmore – Office of the National Coordinator – Query Health

Wes, that's a great point and that is our goal, you know, some of the long poles in the tent include just simple things like getting data use agreements in place and so on, but we are absolutely focused on trying to be able to do production implementations. I would encourage all of the Standards Committee participants to consider whether or not your organizations would be interested in participating in a pilot because we need intellectual leadership, we need folks with a vision and status, and standing to be able to convene enough organizations to make that meaningful, even in a small way as you suggested, Wes. So, I would just, as one potential action item out of this for the committee is to look at your own organization for opportunities to participate here and please let me know if there are some.

Wes Rishel – Gartner, Incorporated

Just to get a clear concept ID for what we're talking about, your concept of pilots includes actual live transmission of real patient data. Is that correct?

Richard Elmore – Office of the National Coordinator – Query Health

Real aggregated patient data, yes.

Wes Rishel – Gartner, Incorporated

Aggregated, right, yeah, but something that is going to be used for a clinical purpose as opposed to the user to say here we showed it working.

Richard Elmore – Office of the National Coordinator – Query Health

Yeah, so the one that is farthest along, we just kicked off the Pilot Workgroup a couple of weeks ago, so it's early days, there are a number of organizations that have indicated interest. The one that seems to be farther along at this point in terms of moving towards pilot is in New York City and so that is an example that will involve live production use across some different sites and many more details to follow, we have to see how the plans for each of those develop, but the intention is to do those in live views. We are actually convening tomorrow a meeting of a Health IT Vendor Advisory Group, we've requested representation from all the EHR and HIE vendors to give us guidance on how we're going to get the data for this and how they might participate, and to bring them in early to that process so that we can be thinking about it in production terms.

John Halamka, MD, MS – Harvard Medical School

And Rich, this is John, of course Beth Israel Deaconess happy to volunteer. We already are in production with i2B2 and PopMedNet and are beginning work with ONC to pilot PopHealth. So, all the data, all the time.

Richard Elmore – Office of the National Coordinator – Query Health

Thanks, John.

Walter Suarez – Kaiser Permanente

John?

M

As my teacher used to say it's always the same hand.

Walter Suarez – Kaiser Permanente

This is Walter, I have a quick question.

John Halamka, MD, MS – Harvard Medical School

Yes, go ahead.

Walter Suarez – Kaiser Permanente

Yeah, thank you. So one of the key elements, this seems to be a query system that aggregates data from the responder. So let's say, you know, you're querying a thousand clinics in a community and, you know, at some point they say the clinics are all into this and they respond with their aggregated de-identified data and then presumably you aggregate the aggregation if you will, and so the concern, the question is really how do you avoid the duplication, double counting of patient data in some of this, because patients visits multiple clinics, and so the same patient is in multiple queries. And if you have an aggregation of the results of a particular setting in a community and, you know, multiple settings in that community and the patient has been in several of those settings, then you have a duplication issue. How do you see that being handled?

Richard Elmore – Office of the National Coordinator – Query Health

You know, we talked a little bit about this earlier. I mean, I think that the idea is that there will be duplication if the patient appears in multiple settings of care that are being queried and it is a fact that anyone asking the question will have to be aware of in terms of how they interpret the results. I think Carol had proposed that there may be some research opportunities here to be able to look at some technology approaches that could overcome some of those obstacles and I think I had added to that that there may also be some policy implications that would need to be considered as well to make further progress in that area. So, from the get-go, Walter, it would have that characteristic of a patient appearing in a setting of a care, potentially appearing in multiple responses back to a question being asked.

Walter Suarez – Kaiser Permanente

Okay.

John Halamka, MD, MS – Harvard Medical School

Well, thanks, we should push on, we have one hour left and I know Doug you wanted to cover all the S&I Framework initiatives and so you are on slide 36, back to you.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Thanks, John. I think what I'd like to do if its okay is to move very, very quickly through some of the updates around the S&I Framework initiatives so that we leave enough time for the discussion at the end. I also want to spend just a very brief time to give people an update on what we're doing around value set management and NLM. So, if that's okay I will sort of hit the highlights and skip through a bunch of the slides that I hope people will have an opportunity to review and provide feedback in whatever form is appropriate. Is that reasonable?

John Halamka, MD, MS – Harvard Medical School

Very reasonable, so please go ahead.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Good. So, I just want to give an update on some of the S&I Framework initiatives. I'm going to skip through a bunch of these slides, you've seen a bunch of these, but just to give a sense of the things we're working on, we've got an activity around transitions of care and the laboratory result interface, transitions of care has been validated. We resolved about 900 different negative valid through the course of this and we're nearing the end of that, I think it's a tremendous effort that people have supported.

Laboratory results interface; we're doing the same, again about 800 or 900 different comments with results of that. We've got the provider directory stuff that is continuing on, certificate interoperability, the Query Health that you've just had a big update on. We've got a bunch of stuff that is going on within data segmentation for privacy, that's just getting started, and work within EsMD as well.

We've got some other things that I think are sort of subsumed by some these activities, the public-health reporting activities, not listed here are leveraging a lot of the work of transitions of care as well. And there is another group focused on longitude coordination of care. Again, leveraging some of the additional work that we've got. So, I'm just going to very quickly go through things.

One of the things that I'd like to be able to take a look at with regard to the transitions of care work is that, you know, this is something that is focused on trying to figure out what is the most important information that needs to be exchanged during different transitions of care. And one of the things that if you take a look at, we've got a series of things that have kind of come out of these initiatives and we're looking ahead to see, well what are the next things that we need to do based on input that we've receive from this committee and the like. So one of the things that we've done is that we've got what we call a clinical element data model and we've been starting to use that term to help distinguish it from activities like the clinical information modeling efforts, because although we want to try to create these definitions, right now we don't have sort of those sophisticated models that we've got coming out of CIMI group.

I think one of the things that we want to do is we want to make sure that those data elements mapped into a consolidated CDA allow people to be successful by creating implementation friendly descriptions of how we would do that and so I think one of the things we want to do, if we measure success as not the creation of specifications but its actual use, we need to continue to sort of work down to getting those how to guides together.

This clinical element that dictionary or kind of clinically oriented definition of data elements that are needed for care transitions, but they're not as sophisticated as the work that is going on in the clinical information modeling groups and the like. We need to think about how to incorporate all the good work

that has happened within these Workgroups and then figure out how that work can be leveraged or how it can be integrated into things like these clinical information modeling efforts.

Finally, we've got this consolidated CDA and I think at our last HIT Standards Committee meeting there was support for taking a look at continuing the process of making the consolidated CDA easier to implement and to look at things like the Green CDA, we think that there is a lot of value in doing that. And this I think is a process that transitions of care, as being one of our more mature projects, is looking ahead to what are the things that we can just sort of tie a bow around and really move from developing good specifications to getting them implemented.

I think our other projects that are in line and that includes Query Health, and some of the others will be doing similar kinds of analysis to figure out what those next steps might be. Again, I'm going to sort of step through these things and I hope people have an opportunity to take a look at those things as well. I think it's a tremendous amount of value that these teams have been able to produce.

For each of the initiatives we've put together sort of a series of things that we're working on and what those time frames look like just so that people have a sense for what activities are ongoing and what we've accomplished, and where we're going with these things. In some sense this is a little bit retrospective because it goes back over the summer, but I think it helps us identify how we can leverage this on some of other activities and make sure that we've got the right processes in place.

For the laboratory results interface, again, this has been an area in which we've been able to balance this through HL7 and we've been able to really begin to kind of converge a lot of the activities around different flavors of HL7 that are able to support laboratory interface exchange. We've got a series of things that are ongoing, the ballot has been submitted and we are currently in the process of doing ballot reconciliation. We'll then be able to sort of incorporate that and we hope to be able to really get to that point of implementation and testing once we've got the ballots resolved through the HL7 process.

I think it's important to note, at least on this slide, that we've got broad agreement across the industry to use this particular standard. We've got a single implementation guide. We obviously realize that there are specialized ways and specialized kinds of labs that may need to be addressed in the future and I think our public-health colleagues are thinking about creating a transitions of care-like approach to laboratory results reporting and so I think that is future work that we are working on as well, but we really, I think have made tremendous strides now and the next steps, just like in transitions of care, is to start developing the technical resources, Java APIs, sample code validation tools, implementation guides, because success in these projects is again not about the specifications but about getting them out there and getting them used.

Provider directories I think has done some good work and creating sort of two competing standards and developing really an incremental approach that leverages both DNS and LDAP and I think what's important here is that the implementation guide in the pilot work is really going to be the key things that we want to be able to be working on in the course of the next couple of months and that will be our focus I think as we go forward.

Of course, with all of these things I think the committee should be thinking given where we are in these projects and what we're doing, at some point we will be reporting back to the committee to give you a sense of what it is that we've been able to accomplish and I think we'll need to then think about where to tee up those discussions so that we've got the right information that can help provide the deeper and broader analysis that this committee can provide for these activities.

So we've got broad consensus now on ways of doing certificate discovery. It'll be critical to getting things like direct implemented and in use and we've got to work very closely with our EHR vendors, the state HIEs, the health information service providers to make sure that we can operationalize the good work of this particular committee.

Data segmentation, again it is a little bit different in the sense that it has been launched more recently. I think it's important because this brings together, you know, really important activities around privacy and security and how do we protect and manage information at a highly granular level? As you can see we're kind of in the earlier phases here of what we call discovery where we're just trying to define the user stories and use cases. I think they're beginning to converge at this point on what it is that we need and then once they've got those use cases we'll begin the process of looking at the standards, the gaps, and then over the course of the spring and early summer again try to figure out the harmonization and what the reference, implementation and validation might look like. So we've got those things on track but clearly a bit earlier in the process. This might be an activity in which we'll want to have some milestones just as informational activity and that towards the middle to end of summer we want to be able to take a much broader perspective on this and make sure that we've got the right kinds of activities and what are the deliverables that are coming out of this project.

Electronic submission of medical documentation is an important initiative that is one of the newest ones that we've got. I think the thing that's important about this is that it is an important collaboration between CMS and ONC and in fact is leveraging a lot of the activities of the S&I Framework to have a broad input into the way in which electronic submission of medical documentation might occur, it has ties to the earlier presentation that Walter gave about how we need to make sure that claims attachment and documentation are sort of brought together and so this is I think a tremendously important thing because we need to take a look at how we move from paper and fax to things like direct, how we integrate that in the back end and into environments that have web services and need to be able to do more orchestration, it ties together data elements needed for medical documentation as well as kind of claims attachment work and I think it's an important point of collaboration that I think will be very fruitful between CMS and ONC.

And so we are trying to figure out about structured claims, what are the technical transport and authentication methods, really at a point and I'm not going to go through all of the elements here, I sort of talked a bit about those, but we are early in the process. I don't think I have a timeline, I thought I did, but I don't have a timeline for this just yet because we're still trying to kind of work out those details as well. But, I think it's tremendously valuable and the work that we've had with Melanie Combs-Dyer and others from CMS I think has been tremendously valuable.

I think broadly speaking we're thinking through too where the S&I Framework tends to fit. We're trying to figure out, and we'll have an opportunity I think to come back to group and provide some more insight in that what are the right kinds of initiatives for the S&I Framework to work on, what are the ones that are maybe early in their development process that need a much richer and a much more agile process. What are the things that are already pretty well established and don't really need kind of that consensus building and the additional refinement and what are the things that are core into the things that S&I Framework should be working on.

And so we're looking at things like our browsers, how we might be able to produce coordinator handbooks so that we can expand the range of folks who have the ability to manage these kinds of groups. What are our best practices there? Can we create wiki's and other kinds of pilot sites that allow this approach to be promulgated more broadly? And how can we develop ongoing relationships and strengthen the ones that we have between ONC, the S&I Framework and some of the SDOs, and so as we think about projects like direct to a portfolio of initiatives to a reusable set of tools and processes that allow people to take what we've learned in the S&I Framework and promulgate that much broader, I think is something else that we're working through and we hope to be able to present back to the committee as well.

One of the things that we're doing as well, and I just want to highlight very, very briefly some of these activities, is that we've heard from this committee that there is a lot of activity, there's a lot of information and sometimes it's overwhelming when you go to the S&I Framework wiki trying to find the information that has been committee recognized, what are those things that are still working documents, where do I find the information? And so we're in the in process of building some tools and resources that will have a front page that will sort of introduce the S&I Framework and identify different groups that may want to participate. So, there may be folks that are just looking for the things that the Framework has produced a

repository of resources for implementers and vendors. There could be folks that are interested in engaging in some of our pilots and since that's such an important part of this, figuring out ways that we can engage people without having to dig through all of the wiki's and then also having kind of a pointer to the S&I Framework wiki so that people can sort of find those resources and participate in the ongoing efforts that we've got.

So, we've got this front page like what is the S&I Framework, how do I get involved, and what have we accomplished and those things will kind of map into the repository of activities that we have, what we've accomplished, how do I get involved in the projects and in the wiki's? And what is that S&I Framework and how can I kind of get that high-level overview of things? We are going to have the ability to point to different pilots that we've got and how to get involved, who are the contact people, because I think it's so fundamental, I don't want that information buried, I want people to be able to clearly engage in that implementation phase because that's so critically important.

The traditional S&I Framework wiki will still be a part of this so that people can find those activities, can engage in some of the ongoing discussions and dialogs as we develop this consensus process. And then within the repository, not that this repository will have everything in a centralized database, but in fact have the ability to link out to other artifacts to be able to manage over time publishing versioning, make sure that we've got the ability to manage all of the vocabularies, the content the specifications around transport and the services, and in some sense to be able to sort of go through and collect those things that you have interest in, put them altogether and download them so that people can then review them off-line if needed.

So we're going to have documents, we've got some multimedia in there. We've got some static and dynamic links that will link out to other sites and we are in the process, I would show you a live demonstration of this but we are in the process of sort of back populating and pulling things into the repository and organizing it and I think we will be able to provide an update to this at one of the upcoming HIT Standards Committee Meetings.

I think one thing I want to highlight is the really kind of collaborative and robust work that we've had with the National Library of Medicine. We've heard it over and over again from this group that value sets and getting those things right are going to be important. And so we've provided some resources to the National Library of Medicine to help us identify those most frequently ordered tests, the most frequently used tests, a core problem list, a set of best approximation of drugs on the marketplace, you know, what are those common ones, making sure that there is access to the Kaiser terminologies, APIs for getting to the UMLS and making sure that mappings, critical ones like SNOMED to ICD-10 are accessible and available to people who are making those transitions.

So, we're going to try to do this in a variety of different ways. One way is that we're working to create an API that will allow us to access value sets and value set definitions so that those can be stored, and curated within the NLM resources, and the UMLS, but we have the ability to go and access those, as well as having the ability to once we've defined or identified a set of values to have a unique identifier associated with those so that we can download those directly. So, both an API as well as a download interface into some of these resources. The thing would be true of some of the work with AHRQs so that if we've got some archived information that's important for us to maintain we certainly have some of our HITSC specifications there. Being able to access to retrieve those things as well becomes a value to things over time.

And so we are trying to put into place not only the work that we've got and the products that are coming out of the S&I Framework, but being thoughtful about what have we learned in this process? Can we identify that? Can we put that down on paper or make that available to others who are curious about this approach and who may want to use this in other kinds of problem-solving efforts. And then we're developing some of the resources that will allow us to link together the important parts of value sets, the important parts of content and the important parts of the specifications around transport and services.

So, with that as sort of a back end and we will continue to work towards that, I've got a couple of things that I've tee'd up that I hope we can spend more of our time discussing. And that is we need to take a strategic long-term view of our plans for Meaningful Use for Stage 3 and I want the HIT Standards Committee early on to provide input, because as we go from collecting those kinds of standards and specifications for interoperability that are sort of shovel ready and we can just take off the shelf, to those that are going to be more challenging that really push the envelope as we think about Meaningful Use Stage 3, having that technical input becomes really, really important.

We need to make sure that the Policy Committee and the Standards Committee stay well aligned and my hope is that early in 2012, so at the January 25th meeting, we should be able to have a working, living document about the kind of things that we need to use, realizing that this is not a static document that is going to be locked in, but that in fact represents our best guess as to priorities and where we want to spend our time, and that as we go through this, we should continually update this as we learn more, have new insights and new information back.

So, this is for discussion. This is just an opportunity to put some things out there because I don't anticipate that these are an exhaustive list, in fact there may be a lot of things on here that are not part of our priorities, but I think it's better for us to react to something and have things out there and this is my attempt to sort of glean from the various discussions that are out there and trying to kind of put some things out that we may want to work on in 2012. I'll just briefly go through them.

One thing that we know we'll have is that the NPRM for Meaningful Use Stage 2 is likely going to come out in the course of next couple of months. We need to make sure that we have time on the schedule to be able to thoughtfully review that and provide comments back to ONC. At our last meeting we talked about quality measures and the importance of us identifying sort of those technical specifications around quality measures that will make it possible for people to implement them easily and to be able to get quality measures consistently and unambiguously represented.

I believe we should take a look at the good work of the NwHIN Tiger Team or Power Team, I guess it was a Power Team last year, and refine again those criteria that we used to say when are things ready, what are the kinds of things we think are important for adoptability and for maturity and I think based on the conversations that we've had both within the CDS group, the quality measure group, and Query Health understanding the value sets and the mappings that are important there, I think we need to tee that up early.

We need to also, as we begin to build out this portfolio, I think we have to have some time about managing that portfolio that includes, you know, the specifications on transport, the specifications on content, the value sets that are there. Query Health will have a lot to say come quarter two. And radiology standards clearly quarter one, quarter two wherever they need to be, but that is a charge of this committee to sort of identify what to do there. We've got activities around governance of the Nationwide Health Information Network that needs to be considered. And then there is this underpinning across all of the work about how do we take our clinical element data dictionaries, the CIMI work, how do we make sure that those things are all aligned as we go forward? Clearly we need to think about Green CDA and maybe if we've made some progress in the first couple of quarters, we can have an update in Q3 and continue to work on making sure our portfolio has simple and easy-to-use resources for us to get to those things.

Finally, I think at the end of the year we have to start thinking about what happens next. We have some time to work on this but we need maintenance strategies. We need to know what the swim lanes are, who does what over time? And we clearly will be getting some updates from public-health, data and practice portability, as well as the tooling in APIs that I think are going to be important for success.

So, with that, I think we're about what 5 or 10 minutes after noon? I have just gone through a whirlwind of activities, but I may have, I hope, caught us up at least almost there for the hour that we are running behind. So with that I'm going to turn it back over to the Johns, let everybody catch their breath a moment and I'm sure there's probably a lot of cards up.

John Halamka, MD, MS – Harvard Medical School

Well, wonderful, thanks so much for that comprehensive presentation and I was just checking, doing a little mini-gap analysis on everything I've ever written in my blog as the work that we need to do and actually in slide 66, you've pretty well covered it, so yay. So cards, who's up and who would like to speak?

Arien Malec – Coordinator for the Direct Project and S&I Framework

This is Arien.

John Halamka, MD, MS – Harvard Medical School

Please, Arien, go ahead.

Arien Malec – Coordinator for the Direct Project and S&I Framework

Thanks. So, Doug, yeah there's a ton obviously going on, I've got a bunch of questions and I'll try to keep it brief. On the transitioning care work there's been a number of us who have been talking about the need for an implementation guide that maps between consolidated CDA and real-world transitions in care, and expresses or defines how to express simple clinical statements. So, for example, I know Wes has pointed to the need to say, to express blood-pressure and define unambiguously how to express blood pressure and potentially if my EHR distinguishes between sitting and supine blood pressure to make sure that I know what the meaning is of a consolidated CDA vital section or vitals organizer section to understand what it is the sending clinician is trying to say to me. Likewise, I've noted that I can't figure out how to say this patient is allergic to latex but has no known medication allergies or this patient is allergic to latex but I don't know if they have any medication allergies. And I think there is a lot of really excellent work that was done in the transition of care work where the use of, or the presence of a good implementation guide could help implementers map between the kind of simple clinical statements view or the EHR object model database view and the interoperability view. So, that's question one.

Question two really relates to both LRI and all the other work that may or may not be going into a Stage 2 set of certification criteria. And it relates to the observation that we've done I think a lot of good work in better specifying interoperability that can be a groundwork for Stage 2 and one of the things we know, is that we're going to learn stuff when we go into the implantation phase. And, so I want to ask what the regulatory mechanism is and the certification mechanism is for the cases where with best intention we put the best work in an implementation guide into certification criteria and then learn three months down the line, six months down line some clarification is required. And, you know, how does ONC respond in a regulatory appropriate way to support implementers in that process?

And I guess the third issue just relates to, which maybe I'll hold until our January meeting, it relates to making sure that we're not overwhelming the community of HIT and clinicians with lots and lots of stuff, but that we have a well-defined focused mission for the S&I Framework and I've got a lot of questions about how that S&I Framework mission become sustainable over the timeframe for 2013, but as I said, that may be more discussion than we have time for, that it may be the request of the Johns that we place mark that discussion for January. So, Doug just to simplify, if you could focus on the transition of care question and the regulatory flexibility question.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Well, Arien, thank you so much for those comments. I mean, I certainly can respond to those things, my hope though is that I'll do less talking and more writing in terms of putting down all of the things that we think we need to be working on and then I hope, you know, the plan is that by January 25th we have together a fairly broad and rich description of all the activities that need to happen so that we can align the HIT Standards Committee work, what is the work of some of the subcommittees and what are the activities within the S&I Framework?

I think you're absolutely right within transitions of care we need to get good implementation guides; success is implementation and use not just getting the specifications out there. The regulatory

mechanisms to create flexibility, that's an ongoing challenge and I think we are continually trying to refine our approach to doing that and we have another shot at it when we come out with the NPRM around Stage 2 Meaningful Use and I think we'll have an opportunity at that time to get a lot of feedback both from this committee and from the broader community.

I think you're absolutely right that 3 is about sustainability. It's preventing burnout in the community, it's about sustaining the efforts and the enthusiasm and the high quality of work that has gone on here as well, and I think that's also part of what we want to think about with regard to, you know, having a review of what's worked, what hasn't, documenting that stuff and engaging a broader group of folks that can help us refine that.

Arien Malec – Coordinator for the Direct Project and S&I Framework

So, Doug I'm following up and see if I can pin you down a little bit. So the transition of care piece, I think that the latter two issues are not as time urgent. The transition of care implementation guide I'm feeling a personal sense of urgency around in the sense that it's kind of my legacy of the S&I work. And I don't feel confident right now that we have, with the consolidated CDA guide, enough semantic specificity to make sure that we can have high quality transitions of care routinely performed between providers who use EHRs and I hope that kind of sense of urgency is shared. And so I just want to flag that particular one as a plea or cry for sustained and determined focus between now and the timeframe where we can influence an implementation guide for the final rule to make sure that we have, at least for the high priority elements, and the most common information that's sent in a transition of care, enough semantic specificity so that we're able to deliver the policy outcomes we're trying to get to.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

So, I share your urgency. I think it's going to be critical for us to get there. Clearly if we want information that is exchanged between two different providers we use, for example for quality measures or clinical decision support, or analytics getting the semantics pinned down is a critical element. Obviously, we can't let perfect be the enemy of good, so I sort of rely on the community to help us prioritize what are the high value things that we need to pin down, and I know that within the transitions of care project they are doing some work, I don't know if Jitin you wanted to say anything.

Jitin Asnaani, Office of the National Coordinator, Office of Standards and Interoperability...

Sure, let me just add to that. This is Jim...for those who know me. You know, this particular comment is important to put in context, in the transition of care work, as Arien very well knows, and as the committee really now knows, we did really 3 big pieces of work, right? We looked at the technical interops specifications as a consolidated CDA and produced a guide around that and that's really more of a standard for actually creating those messages and transmitting them and sharing them rather.

And then the second thing we created was the clinical element data dictionary and that's really the clinically based data definitions. And then we started work around mapping that data dictionary to the technical standard to a consolidated CDA which allows you to start getting the true semantic interoperability. If you think about the different things we've talked about here at the Standards Committee in terms of work we want to do as follow-ups, whether it be Green CDA, a move to a true clinical information model perhaps like CIMI, and this particular point that has been raised right now around a real transition of care implementation guide that allows simple clinical statements to be transmitted into that interops specification, the consolidated CDA, they are all very important, they all provide a lot of value and, Arien, I think we share your urgency on that last item in particular and that we've already starting looking at, not just looking at, but working on a guide that helps to do that sort of translation.

The key of course is that if you don't manage it well and show how it works you can take an infinite amount of time to create a guide that is infinitely complex and the approach we have taken is to take a section prove it out, show how it works, get feedback and go forward with it and that's what we plan to pursue over the next few months. So, hopefully that answers your concern. It very much is the task which we think is critical, urgent and is core to the mission of the transition of care initiatives.

Arien Malec – Coordinator for the Direct Project and S&I Framework

Thank you very much.

John Halamka, MD, MS – Harvard Medical School

And Jon Perlin, I think we assigned work to Arien last meeting and we need to formalize that and then maybe this body of work he has just described is something that can be done in the context of the Implementation Committee because ensuring we have appropriate, easy to implement and complete specifications is something that testing criteria and certification criteria can enforce.

Jonathan Perlin – Hospital Corporation of America

John that's a terrific suggestion and I think one we can both substantiate it in the Implementation Workgroup as well as include that as part of what will be our consensus, what I hope will be our consensus endorsement of the 2012 work plan.

John Halamka, MD, MS – Harvard Medical School

So, Arien there you go.

Arien Malec – Coordinator for the Direct Project and S&I Framework

Thank you.

John Halamka, MD, MS – Harvard Medical School

Any other comments?

Wes Rishel – Gartner, Incorporated

This is Wes, my card is up.

John Halamka, MD, MS – Harvard Medical School

Okay, Wes?

Wes Rishel – Gartner, Incorporated

So, building on Arien's point, I want to make a statement here, I'm going to self-censor myself in the process of the statement, but you'll get the general idea. When the implementation guide is published and is cited in a regulation there is no possible way that it is right, that is to say we know from all our experience that standards evolve through use and something that has just come off the assembly line or even which is the state of the consolidated CDA, the various sections of the consolidated CDA implementation guide that might be used, there are going to be issues that arise and they will arise at several points. One is when individual implementers/developers try to implement them. The second is when they try to test with one another because they're really trying to implement somewhere. The third is when they try to go through certification. And, you know, this information that has been known to DHHS since the early days of HIPAA, the same identical issues came up with HIPAA transactions.

I'm saying this at a time when Doug probably has to worry, when he goes back to his office, whether his desk chair has been sequestered while he was gone, but we need through the work of ONC and the Implementation Committee and whatever other resources are necessary to come up with a forum for discussing these issues as they come up for getting at least a reasonably accurate estimate of how HL7 might decide the issue if they went through their full balloting process for simply answering technical questions that are not really issues in the specifications per se, and for making public testing available as NIST has done in the past, but making it available and well-publicized and links to that public forum.

And I would not, in a time of tight budget, I wouldn't be emphasizing this so much, except to say that it is really our best hope that implementations around Stage 2 go beyond meeting the minimal implementation requirements and become really active benefits to healthcare, you know, within a single Meaningful Use stage cycle.

John Halamka, MD, MS – Harvard Medical School

Okay, so well, Doug any comments?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

No, I think those are all really good. I'm just writing with all of these things. I think what we'll want to do is to take these comments and translate them into things that we need to do within the HIT Standards Committee to queue up some of this work and maybe some and maybe some of that falls under the NPRM review when that comes out to try to figure out how to include this. Maybe some of it happens in the maintenance and how we maintain these things over time as there's updates and changes. But I think those are all important points.

Wes Rishel – Gartner, Incorporated

I think the Implementation Committee, I mean the reason I went back to this working with the Implementation Committee is because I feel these issues are important, but to a certain extent I think they actually have to be addressed in the wording of the regulation, which is why I'm pounding so hard on it today.

John Halamka, MD, MS – Harvard Medical School

Other comments? Wow, are you suggesting we've tired people out?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Careful then I get to set up all the work you guys get to do.

Walter Suarez – Kaiser Permanente

Yes, this is Walter, I do have a question.

John Halamka, MD, MS – Harvard Medical School

Yes, go ahead.

Walter Suarez – Kaiser Permanente

Yeah, this is Walter, again. And this was something that perhaps was mentioned earlier by Arien, but I think there is a question really out there about, you know, when you step back and look at all the work that is being done by the S&I Framework and all products, you know, ultimately will be implementation specifications, and all sorts of other recommendations and guidelines, and the question is, how does that get then put into adoption? And, you know, we have the Meaningful Use process and the requirements and the regulations to define, you know, metrics and standards, and certification criteria. And so the question is, so let's say we finish our work on Query Health and they come up with a whole host of recommendations. How do they get into the mainstream to be adopted and expected to be adopted, is it part of Meaningful Use Stage 3 regulations, because Stage 2 are not going to be, of course, there, or I mean they will be there next February, and so by the time these products come out, you know, Meaningful Use Stage 2 will be already on its way, or is there any other expected mechanism to have these recommendations and outcomes from all this work of the S&I Framework initiatives be adopted and be expected to be used?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

So, I'm not sure exactly, I guess the answer to the question; I think we have a lot of different ways that we can kind of create the incentives for people to adopt the work that is happening in the S&I Framework. I think there has been testimony within some of the S&I Framework initiatives, I think in particular Query Health, that has sort of talked with the Policy Committee and sort of given them a sense of what's going on there. To me, I really think adoption and use is our success metric. What that means is that we have to produce things that are usable and that are relevant, and that are implementable, and that solve real problems.

I also think that we need to think very, very broadly about all of the tools that we can do to kind of get to the outcomes that we'd like to see. So, some of them may be things that are related directly to the regulations and to Meaningful Use, some of them may come in other ways to incentivize through quality and pay for performance, some of it may be other kinds of costs savings that happen from being able to create more interoperability across user data or the module set that fits together.

I'm not sure what are all those things that are out there, but I think we are trying very hard to, one make these things useful, because, you know, we've said this before, they're not standards because we say they are, they're standards because use them and I think that's an important mantra that we have to continue to think through, but we also have to make sure that we're using the full range of things, you know, I think our federal partners are incredibly important, working with the VA, the DoD, SSA, CMS, all of those folks to make sure that we are all well aligned in what we're trying to accomplish, because I think that becomes something that then the industry has clear directions as to where we're going. And I think that's going to make it a lot easier for people to move in the right direction to adopt the standards and start to use them.

John Halamka, MD, MS – Harvard Medical School

Very good. Other comments?

Walter Suarez – Kaiser Permanente

One other one, this is Walter again, just one other one to follow-up, not so much follow-up, but another point. On the slide on Q1, Q2, Q3, Q4, the Q slide I guess, the question I have is I didn't see privacy and security standards be pointed as a specific element to consider during the year and I presume there is going to be a number of places and areas where we would have to go back and look at privacy and security elements within these various aspects. Do you see any specific or do you expect to have any specific privacy and security products coming out at any point during the next year?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

I think the EsMD work on data segmentation are probably going to be an important aspect of sort of adding to the conversation around privacy and security. I certainly think that the ANPRM, there will likely be other comments that will come out with regard to what's in those regulations. So, I think that there are going to be some opportunities. I'm just making a note here that maybe we should tee that up as an explicit thing. In some sense, we want to make sure that we're not missing anything and so it may be relevant and useful in one of the meetings to just tee that up and make sure that we're not missing anything and have a chance to step back, and make sure that we've got all of the pieces that we need to make sure that patient's data, their privacy is maintained and secured.

Walter Suarez – Kaiser Permanente

Yeah, in some ways it seems to be valuable to consider the privacy and security, and I mean I know that's being done within each of the S&I Framework initiatives, but to bring those back to ask specific elements I guess, so even in the Query Health, in the EsMD, in the data segmentation of course a big one, so I would hope that during the year we would be able to, you know, kind of do a focus view of privacy and security within each of those initiatives.

John Halamka, MD, MS – Harvard Medical School

Well, thank you very much for those comments. So, Doug, if we look in general at your Q slide and we dovetail it to some of the issues I've been tracking over time, on the content side lots of Green CDA, CIMI, detailed clinical model discussions, you've got those incorporated in Q3, DICOM and radiology you've got that incorporated in Q2, Query Health you've got that incorporated into, well there's quality measurement standards in Q1 and Query Health in Q2, so you're covering both sides of that discussion. The vocabularies with the notion that we would have one-stop shopping for all vocabulary resources downloadable from the NLM with all appropriate value sets needed to support future stages of Meaningful Use, you've got that in Q1 and Q3. And on the transport side ensuring that NwHIN exchange is as robust and simple as it can be with provider directory components, certificate management, and certainly Walter to your comments about security and privacy because there may be relations there to metadata and such

issues as segmentation, and you have that all incorporated into both Q1 and Q2. So, I think you've actually hit on the issues that I've been tracking, but again any other issues folks would like to add?

Leslie Kelly Hall – Senior Vice President for Policy for Healthwise

Yes, this is Leslie Kelly Hall again. Sorry to be the newbie with questions, but Doug I see in Q3 the consumer mediated information exchange and also in the Transitions of Care Workgroup we've talked a lot about the patient as an active care team member and being able to provide input into the record or just involved in general in care transitions electronically. And that seems to inform other Workgroup items that you have here once you make the leap that a patient is part of the care team. And I wondered if you could speak to whether or not your items reflects all of that work or are there areas or opportunities for work that you see?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Well, I think consumer mediated information exchange is, you know, a really important thing. Some of the kind of putting things into the various buckets as to when it needs to occur was done in some sense arbitrarily just looking at the calendar. We know that we're going to have to spend at least a meeting or so on kind of taking a look at the NPRM, we've got a couple of different rules that are likely going to be coming out in Q1. I didn't want to overwhelm the committee by having too many things that had to be accomplished in January and February, and so that's kind of why it got sort of spread out there. I think your point though is well taken, is that we would be remiss if, as we think about Query Health, and as we think about privacy and security, and as we think about radiology, and transitions of care, and vocabulary, as we think about of all these things, we would be remiss if we don't make sure that one of the perspectives that is included is going to be sort of the patient and the consumer.

I think a lot of the work that we talk about in terms of simplicity and making things easy to get out there and use suggests that we may be moving from big information systems sitting in big hospitals and rooms that have, you know, fire suppression systems, to mobile devices that patients are going to carry with them and that the ability for us to be able to support those will require a perspective as we think about the standards we recommend.

Leslie Kelly Hall – Senior Vice President for Policy for Healthwise

Thank you.

John Halamka, MD, MS – Harvard Medical School

And newbies are encouraged to ask questions, in fact if they're silent call on them. Other comments as we look at our work plan for the next year?

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

John, this is Dixie, I have a true question about, there are two areas that have significant privacy and security questions and standards questions around them, policy and standards, that, you know, I don't know exactly how they can be injected into our agenda, but I think they need to be and those two areas are cloud computing, software as a service, you know, offering EHRs as a service, and secondly accessing EHRs using mobile devices, there are additionally safety issues there as well. In order for us to undertake those kinds of standard questions, does the Policy Committee need to bring them up in a policy context and toss them over the fence to us? How do we position ourselves to address standards in those two areas?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Dixie, that's a great question. I don't think that we're constrained by something coming through policy. I think if there is clear technical and standards related specifications that we need to think about there is no reason why those things couldn't start in the HIT Standards Committee and then begin the dialog that is necessary from a policy perspective as well. Both policy and technology sort of go hand-in-hand with all of these things and so I think it is important to sort of think that through. I liked your list of cloud, you know, EHR service and mobile devices as being technology kind of on the cutting edge that we need to

make sure that we're taking that path of least regret and we're considering how those things might be included.

Let me take this time too to also think through, as you think about the work that we need to do in 2012 there may be certain kinds of initiatives, this is not a review of work that has happened in the S&I Framework and this isn't something in which we are kind of reviewing existing regulations or taking a look at implementation challenges. We may in fact need to invite folks to tell us more about what they're doing and hearings, and things like that require a little bit more lead time. We need to make sure that we've got the right people invited and things like that. So, that is something that we should consider and if that's something that we think needs to be accomplished we probably want to identify those things early so that we can make sure that we've got sufficient lead time to do them right.

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

Well, I think both of those areas are, well I know for a fact, that both of those areas are really experiencing very, very rapid uptake and so, you know, we can't wait too long to address them I think.

John Halamka, MD, MS – Harvard Medical School

So, Dixie's point is so timely, I've been writing numerous articles about BYOD and I have 1000 iPads and 1600 iPhones, the bring your own device is real and very problematic.

Dixie Baker – Science Applications International Corporation – CTO, Health & Life Sciences

Yes.

John Halamka, MD, MS – Harvard Medical School

And Dixie, you know, one of the things I'll share with you is that as we have worked with many white hat hackers, we have asked them to go to organized crime databases and syndicates and try to purchase credentials of Beth Israel Deaconess Clinical Staff and in fact they been able to do so because Malware, which does keystroke logging has been found on mobile devices they brought from home. So, this is something we absolutely as a country need to address and to me if there is some mechanism of getting at least, as you have done so well in the past, recommendations for best practices, I'm sure the country would thank you for it. So Doug put it on our work plan.

Floyd Eisenberg – Senior Vice President of Health Information Technology - National Quality Forum

This is Floyd with a comment.

John Halamka, MD, MS – Harvard Medical School

Yes?

Floyd Eisenberg – Senior Vice President of Health Information Technology - National Quality Forum

Hi, thank you. I actually, picking up on Dixie's comment, the more I speak with folks in the quality realm who want information are often thinking of devices and apps that patients enter their own information and it's that information, whether it gets to the EHR or not that is going to be needed for measurement of population health. So it may be worth seeing, it's more seeing what is needed for the future. I know it's not a one year project, but that would be important on the data side. And the other comment is on the value sets and mapping I heard a lot of discussion, and thank you Doug for the work you're doing with NLM on what I hear is convenient set, so all the problems, all the meds, but when we get down to queries around specific clinical decision support needs or quality measures there are the very granular atomic value sets that need to be managed and harmonized to make information reusable. So, I think it'll be important to discuss that in Q1 as well.

John Halamka, MD, MS – Harvard Medical School

And certainly novel uses of data such as use of the PHR and providing such things as symptoms or further details that can be used in quality measures is something I'm also hearing more about, so that is a very good point.

David McCallie, Jr. – Cerner Corporation – Vice President of Medical Informatics

This is David with another change of subject.

John Halamka, MD, MS – Harvard Medical School

David, please?

David McCallie, Jr. – Cerner Corporation – Vice President of Medical Informatics

Doug, I'm curious to know if ONC has any focus or role on the debate around usability and safety standards triggered by the recent IOM report and other discussions and whether there is any impact with those debates on our committees?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Yes, and in fact we've got some activities and conversations that are going on with NIST and with others around usability and safety. I think we take that very, very seriously. We certainly want to minimize any harm that might come because really, as we all know, there's so much benefit in terms of getting data electronic. I'm making a note of that, that may be something that we also need to tee up.

Jodi Daniel – Office of the National Coordinator – Director of Policy & Research

And Doug, this is Jodi, I'm on the line.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Okay.

Jodi Daniel – Office of the National Coordinator – Director of Policy & Research

Do you want me to jump in?

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

Yeah, jump in.

Jodi Daniel – Office of the National Coordinator – Director of Policy & Research

Yes, so we received the report and we actually have a team of folks here as well as we're working closely with other federal agencies that have sort of a role to play or were specifically identified by the Institute of Medicine in that report, and we're looking to develop a surveillance in action plan to address some of the issues that they raised and to address Health IT safety more broadly. At this point, we're kind of digesting and trying to figure out what authorities we have and what are the best ways that we can address some of the issues they raised about transparency of information, about products, about kind of understanding when there are adverse events and coming up with a mechanism for monitoring that, as well as research. They identified that there was limited information about safety in Health IT enabled environment and data to kind of help inform the thinking and the policy in that space. You know, we are, as Doug mentioned, working with NIST, and they did talk about usability as an issue as it relates to patient safety and Health IT. So that is something that we have been talking with them about.

NIST has been focused on their EUP, their EHR usability protocol, which they just received comments on, so they are revising that and sort of focused on guidance in that space. So, I'm not sure exactly what would be right for the Standards Committee to focus on in that regard. If there is something particular would love to hear your thoughts on that. If not, what we could do is come back to you all when we have solidified some of our thinking and we've come up with our plan and talk it through with you all so that, you know, if there are things that emerge from that, you know, again we can have an opportunity to talk about it then.

The IOM had asked that we have a surveillance and action plan within 12 months. Farzad said we're going to beat that. We're hoping to beat that 12 month timeframe, but I'm not sure exactly by how much,

so I don't have an exact date when we would be coming back to you, but it would likely not be Q1, but it also likely would not be Q4. So sometime in the 2 or 3 realm. But if there are specific areas where, you know, where you think that the Standards Committee might be interested in engaging I would love to hear about that.

John Halamka, MD, MS – Harvard Medical School

Very good. Well I know we are getting near time and I believe Judy Murphy is back with us. So, Judy is there any benediction you'd like to offer?

Judy Murphy – Deputy National Coordinator for Programs & Policy – Office of the National Coordinator

Thank you John. You know, just the usual thank you for all the hard work as we head into the end of the year and holidays here, just to thank everybody for all the effort. It's been quite a year when we think of all the summer camp activities and all the power teams. So, I'll end with that unless anybody has any questions for me.

Rebecca Kush – Clinical Data Interchange Standards Consortium

This is Becky and I have a comment, I hate to come after the benediction, but I just had an addition that I wanted to make to the minutes that I didn't get in in time. So, were you going to still ask for that?

Jonathan Perlin – Hospital Corporation of America

We were, so it wasn't quite the benediction because we have the very important public comment, but Becky, or I went around the horn very fast, Becky you had something that you wanted to offer as a pickup of a topic you offered at the last meeting that wasn't captured in the minutes and so if you'd go ahead and offer that.

Rebecca Kush – Clinical Data Interchange Standards Consortium

It's significant in the sense of changing the minutes, but I did want it recorded that I had made a comment to re-enforce the comments that Wes Rishel and Stan Huff, and Chris Chute had made around the CIMI initiatives and in particular that they're bringing together the stakeholders that have to do with medical research along with healthcare to ensure convergence of those efforts. And I believe that this is going to pave the way into Meaningful Use 3 in particular, and in that sense I would like to make note to Doug's plan for 2012 that I'd like to see where efforts like the enterprise vocabulary services...IHE, RFP, the FDA...plans and the IS150H4 converging for using EHRs for research where those all fit with the S&I Framework plan. So those are two things, one I'd like to make an addition to the minutes from November 16th, and secondly in that same vein I'd like to add to some of the plans for 2012 around that topic.

Jonathan Perlin – Hospital Corporation of America

Okay, so let's divide that in two phases and we'll record that thought into the minutes for this meeting and unless there are any objections we'll consider this an amendment or addendum to the minutes as approved to recognize this important topic. Are there any objections? Hearing none then we will incorporate that into the prior minutes and Becky, sorry that we missed you on earlier go round. John Halamka anything that you would like to add before we transition into the final action, of course the public comment?

John Halamka, MD, MS – Harvard Medical School

Well, just again, thanks so much to Doug for putting this comprehensive presentation together. I think we are all reassured as to the progress on the S&I Framework initiatives and I think we now all have a sense of the 2012 work ahead. You know, one just reassurance, no matter what happens politically in Washington, I think Wes you made comments about chairs being filled, I believe that the HIT Standards Committee was chartered by ARA and HITECH and therefore we politically go on no matter what happens in Washington in any executive branch action, I think, more to come.

Jonathan Perlin – Hospital Corporation of America

First we'll defer the legal hint to Jodi Daniel, but there is a lot more to come and I do want to actually just transmit one sense. Is it the sense of committee that there is agreement and support for Doug's

framework and encompassing the recommendations, and discussion that were just completed, are there any objections to offering that to ONC as a group support for the framework as described and sensitive to the discussion that we just completed?

Walter Suarez – Kaiser Permanente

Yeah, I think with the issues that we made I don't have any objections.

Doug Fridsma, MD, PhD, FACMI – Office of the National Coordinator – Director Office of Standards & Interoperability

And John, I think, you know, in January we'll come back with a more comprehensive and perhaps more detailed plan. I think the thing that's important to recognize is that this I think should be perceived as a living document, that we will do our very best to sort of create the priorities, but I think the committee can at any time say change things around or reprioritize based on discussions. It's really intended to provide us a roadmap not to lock us into a particular set of tasks.

Jonathan Perlin – Hospital Corporation of America

Yeah, that's very well said. But hearing no objections I think we can get a sense of the committee that the work is largely on track with the recommendations as offered and the appreciation that it is a living document and will really require ongoing discussion and engagement. And it's really in that vein of incredible engagement, particularly knowing that it's the holiday season and how complex and busy each and every one of your professional lives are that John and I, the ONC team want to thank all of the members of the Health IT Standards Committee, all of those who participate in the Workgroups and really just enormous admiration and appreciation for everything that you do, not only at the meetings but in particular between the meetings.

Similarly on behalf of the Standards Committee want to recognize you Doug, Judy in your new role and all of the members of the ONC team, Farzad, especially Mary Jo really for picking up really very, very large responsibility, Jodi for keeping us on track, and anyone that I've missed but not mentioned, just extraordinary appreciation from the Standards Committee for your hard work, your sensitivity to really try to bring very complex issues together in a trackable fashion and share with all a larger purpose that is the improvement of health, healthcare and wish everyone, before we go to the public comment period happy, happy holidays. Let's turn back to Mary Jo Deering before we officially conclude our proceedings to bring in the public for any comments they might have on today's committee meeting.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Thank you very much Jonathan and thanks to all of you for your good wishes. We certainly do appreciate all the hard work that you do and it has been very easy to take on this role given the people that I get to work with. Operator would you please remind the public how they could offer a public comment and open all the lines please?

Caitlin Collins – Altarum Institute

Yes. 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 1-877-705-6006 and press *1 to be placed in the comment queue. We do have a comment from Robin Raiford.

Robin Raiford – Advisory Board Company

Hi, it's Robin Raiford from the Advisory Board Company. Just a comment on what John Halamka just said, you are right HIT Standards Committee is in ARA, its Section 3003 on page 113.

John Halamka, MD, MS – Harvard Medical School

Very reassuring, well thank you.

Robin Raiford – Advisory Board Company

There you go. HIT policy too, Section 3002.

Jodi Daniel – Office of the National Coordinator – Director of Policy & Research

And this is Jodi I can just confirm the committees do continue on as long as that statute is in force. So, nothing should change our work. The elections next year should not have any influence on the continuation of the committee.

Jonathan Perlin – Hospital Corporation of America

Thank you both for the counsel on that. No rest for the weary. Mary Jo other questions in the queue?

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Operator do we have anyone else who would like to offer a comment?

Caitlin Collins – Altarum Institute

We have no more comments at this time.

Mary Jo Deering, Ph.D – Senior Policy Advisor – Office of the National Coordinator for Health Information Technology

Thank you.

Jonathan Perlin – Hospital Corporation of America

Okay, having completed a very robust agenda not only today but throughout the year, I want to thank every one of you for all of your hard work. I wish each of you happy, happy holidays and all great things in the new year. Travel safe and thank you again. We stand adjourned.

John Halamka, MD, MS – Harvard Medical School

Thank you everyone.

Public Comment Received During the Meeting

1. I would suggest the committee hear from Art Davidson (Policy committee) and Seth Foley on this public health topic at a future meeting.

How Usability involves 1. patient safety and 2. clinician adoption (as it integrates in the workflow) is important to consider studying. Thank you.