# Meaningful Use Workgroup
# Subgroup #3 Improve Care Coordination
# Draft Transcript
# May 17, 2012

## Roll Call

**MacKenzie Robertson – Office of the National Coordinator**

Good afternoon everyone, this is Mackenzie Robertson in the Office of the National Coordinator. This is a meeting of the HIT Policy Committee's Meaningful Use Workgroup, subgroup #3…

**Caitlin Collins – Altarum Institute**

Just a moment, we have not yet joined with the public, just one second.

**MacKenzie Robertson – Office of the National Coordinator**

Okay, rewind.

**Operator**

All lines are bridged.

**MacKenzie Robertson – Office of the National Coordinator**

Thank you. Good afternoon everyone, this is Mackenzie Robertson in the Office of the National Coordinator. This is a meeting of the HIT Policy Committee's Meaningful Use Workgroup, subgroup #3, Improving Care Coordination. This is a public call and there will be time for public comment at the end. The call is also being transcribed, so please make sure you identify yourself before speaking. I will now quickly go through roll, and ask any staff members on the line to also identify themselves. Charlene Underwood?

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

Here.

**MacKenzie Robertson – Office of the National Coordinator**

Thanks Charlene. Michael Barr? Jessica Kahn? David Bates? George Hripcsak?

**George Hripcsak – Columbia University**

Here.

**MacKenzie Robertson – Office of the National Coordinator**

Thanks George. Eva Powell? Leslie Kelly Hall?

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

Here.

**MacKenzie Robertson – Office of the National Coordinator**

Thanks Leslie. Larry Wolf?

**Larry Wolf – Kindred Healthcare – Senior Consulting Architect**

Here.

**MacKenzie Robertson – Office of the National Coordinator**

Are there any Meaningful Use Workgroup members on the line also?

**Greg Pace – Social Security Administration – Deputy CIO**

Yes, this is Greg Pace.

**MacKenzie Robertson – Office of the National Coordinator**

Hi Greg. Anyone else? Are there any staff members on the line?

**Michelle Nelson- Office of the National Coordinator**

Michelle Nelson, ONC.

**MacKenzie Robertson – Office of the National Coordinator**

Thanks Michelle. Okay Charlene, I'll turn it over to you, or to Leslie.

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

Okay (laughter). Hi, welcome everyone and thank you for coming. Today we're really going to hear about how standards can inform care coordination. We will hear from a variety of leaders about the work that's already been done and work yet to do. I think that you'll be encouraged by the level of interest, the breadth of work already done and the enthusiasm for care collaboration in all aspects of the industry. This is really an exciting time for healthcare. Perhaps the biggest opportunity for improvement in healthcare is "Triple Aim," is collaboration of care with all team members and providers from all parts of the care community, the patient and those that support patient. So, with that in mind, I'd like to open this first to John Halamka, who's going to give us the big picture overview of standards and how they can contribute to this work. John?

**John Halamka, MD, MS – Harvard Medical School**

Great. Thanks very much for allowing me to join the group today. I'm today at a CIO forum retreat for the state of Massachusetts where all the CIOs are talking about the challenges ahead to deliver safe, quality, efficient healthcare. Inevitably what we want to do as a group is support a reimbursement system that focuses on outcomes and quality and not just quantity of care. So we've created this roadmap of all the steps that are necessary to achieve that in the Commonwealth. It starts with universal adoption of electronic health records, so we're gathering data at every patient encounter in a structured way. Now why do we want to gather it in a structured way? Well, if we're going to coordinate care across inpatient, outpatient, emergency department, long term care and SNF, sending pieces of paper or PDFs or faxes is, of course, just not going to be sufficient. So, our rules are, capture data in a structured fashion that is then going to be capable of being sent from place to place, using standards for content, vocabulary and transport.

The state needs a healthcare information exchange based on these standards, to ensure that we have data liquidity. Once we have that, then novel things are possible; of course, patient and family engagement. As we gather structured date, it's going to be sent to the patient's family so they can be a participant in their care. It'll be sent to repositories where we can do analytics. Analytics are going to help us inform best practices, do pharmacovigilance, make it possible so that we can understand variations in cost and quality in the Commonwealth, and make real-time adjustments to the care that we deliver, based on the experience of other patients. So all of these visions, they all depend upon having in place the standards for us to represent data so it's comparable across the sites where it's gathered, and to make sure that it can be securely transmitted, respecting patient's privacy preferences.

The kind of standards that I think you'll hear some of these other folks on the meeting today talk about, is how is it do I represent an encounter; how is it do I represent a transition of care; how is it I represent a lifetime medical record. Oh, once I compute a quality measure, how do I transmit the quality measure to the government or back to a payer? One of the participants in today's meeting said, "today we're using

spread sheets to take data out of electronic health records and then those spreadsheets are emailed around to all of the appropriate entities. Well, we don't want to do that anymore, we want to ensure that its end-to-end data capture as part of the process of care, resulting in quality measures that then can be transmitted so there is broad understanding in a transparent fashion across government and private payers what quality care is being delivered and how.

So, the work of the Standards Committee is to look at all the gaps. If this is our vision, if these are the standards, types we want, where do we lack standards? Well, so for example, there are only now emerging standards for transitions of care. I think Larry Garber will talk about some of those. There are only now emerging standards for how we represent a quality measure and how, whether it's looking at numerators and denominators or providing detailed justification for how a quality measure was computed, it's very, very early. As we've thought about Meaningful Use Stage 1, 2014 edition and 2016 edition, we recognize it's a journey. That these standards that we choose have to be tested and piloted to make sure they're good enough, that there has to be time for industry adoption and incorporation into products. And so I think what you'll see, 2014 edition most of the standards are well tested and a few of the standards are early, but good enough; and as we look to the next version of Meaningful Use, I'm sure we'll focus on quality in e-measures, more patient and family engagement, and more ways to make the barriers, the friction to exchanging data, less and less.

I hope gone will be the day when a software vendor says, I'm going to send data from point A to point B and it will cost ten thousand dollars for the custom interface. We want to have the standards in place so that everything I've outlined with sharing data, measuring quality and engaging patient and families is included in the product, because the standards are so well documented. That's a high level, brief introduction to the world of standards and where we're going.

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

Thank you, John. I think that, and this is Leslie, it really is important to talk about standards as a liberating mechanism, and I think you've articulated that quite well. Oftentimes standards are viewed as something that is limiting, and actually, when there is common definition that becomes liberating, whether it is in language or data standards. So, I'm very encouraged by the efforts and appreciate your overview. I know you have to go back to your meeting, so, if there are any quick questions of John, before we transition to the next presentation, please ask now. All right, well thank you very much John and have a great afternoon.

**John Halamka, MD, MS – Harvard Medical School**

Great, thank you. Have a good meeting. Bye.

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

Bye. All right, the next presentation is mine, and I will be reviewing some of the work done at the Health Information Technology Standards Committee for patient engagement. This was presented on April 18th and the results of about three weeks of work. Next slide. So our charge for this particular Power Team was to assess the standards and certification criteria in the NPRM and provide recommendations for strengthening consumer and patient engagement components. Next. We wanted to make sure that Stage 2 standards met current opportunities for engagement and also to make sure that we had a framework to weigh future measures against. So, this was a very strong exercise in an approach to gauging the success of standards across all of Meaningful Use. Next slide.

We had a group from across industry representing patients themselves, patient advocates, vendors, government officials, policy leaders, nurses and patient advocates. In fact, one of the big areas of

learning came from the patients directly. Their involvement made this team really look at the patient

voice. What is it that patients expected from standards and policy, and it was very enlightening for us. Next slide please. So, from the group we determined that where policies don't exist or rather policies exist but standards don't, that there should be harmonization done between both patient-facing systems and EHRs, done concurrently. Basically a twofer, so that any time standards are developed within the S&I framework, we always look at that flip-side of the coin, what's done in EHR should have some impact to the patient-facing system. Where there are gaps in policy and standards exist, we need to harmonize those efforts and where both policy and standards exist, we need to make sure that that harmonization is continued between patient-facing systems and EHRs.

Next. We reviewed the NPRM as a group and said, how do we judge whether this information or these objectives meet the needs of patients and engaging the patients and their families. We took very much of

a schematic approach. The themes that we came up with also had both a patient need, a systems need and a quality measure. For the first two, "nothing about me without me," gets to informing the patient. The patient is a participant in care, and should be informed often, regularly and completely. "I am a contributing care team member," outlines the need for patients to feel that they can contribute to their care, they can provide information about their care, they can provide histories and in fact, the patient is often the sole source of truth for information. And so allowing the patients information to be contributing into the health information technology ecosystem was an important component.

EHR systems have a corresponding patient-facing system action and that gets to two for one, and the patient-facing systems are not encumbered by legacy technology. Today this is still very open and emerging technology; how do we make sure that we're designing standards and future systems and means to accommodate the patient using newer technology. And then the last overarching theme was, how do I compare? When we think about quality measures today, we think about how as an institution, what we might be doing as compared to a national standard. But really what quality is all about is making sure that the patient is getting the best possible care identified. So, how do I compare gets to a patient knowing not only how well an institution is doing towards the national effort, but how their care and their participation in their care compares to that overall need.

Next slide. So today I'll talk a little bit about the overarching themes and the corresponding principles related to care coordination and collaboration. Next, and I'll go through these pretty quickly. The nothing about me without me, I want it understandable, in plain language and in my language. Next. The communication should be based upon my preference. I want to be able to CC me some or all of my records. So, as the care is happening, it might even actually be orders, this group said, hey, CC me, let me know what's being done. My preference is informed care, safety and decision. Next. My access should be based upon my preference. I'm a credible source of information, I am a contributing care team member. The data I generate is material to care. My goals may be episodic, chronic or quality of life goals. I can contribute to quality outcomes. I am part of the care team and it's reflected in the EHR. I'm an important safety checkpoint. I am a health data exchange of one. Until we get all this going, patients will be moving their data and we need to help them. I'm an important participant in shared decision making. The messages we share are material to health and care.

As an EHR system, there's an action and a patient system reaction. The current workflow can adopt to support patient engagement; orders are a great example. Next. We want to make sure that standards are expanded and harmonized so that when something is created once, its used often, including the patient and any member of the care team. View, download and transfers should be provider directed and patient… excuse me, that should say provider protected and patient directed and orders can be directed to patients, so they should be included in that workflow. Only patients are the source of adherence information; we're the only ones that know. I think John mentioned that earlier too when he talked about pharmacovigilance. Data reconciliation should include the patient, as the patient's the only one that

knows what they have done. Patient-facing systems are not legacy systems, so innovation should be encouraged and not limited by older technology. Transactional approaches are the minimum requirement; we should always be stretching opportunities for technology. View, download and transmit should be fluid and connected to education. And patient-generated data should also be fluid and be able to be moved and integrated to anyone in the care continuum. Standards should be accelerated where patient-generated data is likely because that'll be green fields, we might as well start with design that'll incorporate a much broader view. Vocabularies also need to be standardized and harmonized. New design should be designed with the patient in mind. How do I compare? Let's proactively identify the care the patient should be getting.

So those were just some of themes that this team used to assess the current NPRM and to also set a direction for future efforts, beyond the 2014 edition, really making sure that the patient's voice is an anchor point for care coordination, care collaboration and future innovation. Some of the frontier issues or borderline issues that we discussed were clinical decision support including the patient in shared decision-making, especially around preference-sensitive care. We discussed at length that patient communication; it should always include relevant education so the patient is informed with every online activity, that the Metadata as well as raw data for any patient should be computable and discrete. We

heard from patients over and over again where they needed to get their raw data so that they could graph it or use it in new ways and that of course, that any care team roster should include the patient, both from an institution point of view and a community point of view.

Next. So, you'll see these overarching themes and comments in another paper that we've prepared on key catalysts for change at this link. But the message to go away with for this session is that patient engagement is absolutely fundamental for care collaboration and care coordination, and will be one of the key themes of this group's work, to make sure that the patient has the right to view, download and transmit, to participate in their activities within health information technology and help make better health decisions for themselves. So with that, I'll ask if there are any questions?

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

So Leslie, this is Charlene. In terms of the themes, and again this is very well done and it will be interesting to see if we can put kind of a broader framework around this because so many of our group, our areas are overlapping. But the one that strikes me as a patient that I'd like to see would be, How am I doing compared to my age group, or, what's that cohort of patients like me that I can compare myself to, which would seem to link to our population based health or for me, what's the... for my population, what's the best action that I can take here? Any discussion on capability or view as a need or a framework element?

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

Absolutely; in fact, you have articulated better the whole idea of how do I compare. And there was a good of activity or discussion about this. For example, I don't drive differently because Ford changes the assembly line; but, if on my car I can see an indicator that tells me I need to something about my engine or put on my seatbelt or what my speed is, I have an opportunity now to interact. And so what the group talked about is let's stop just judging how well the assembly line is doing, and show how that reflects or how that impacts the patient or the driver. So there was considerable…

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

(Indiscernible) like we're all trying to get some guardrails that we're trying to judge what's good health around, right?

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

Right.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

And we're trying to constrain the use of healthcare… I don't want to… you know what I'm saying though.

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

Right.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

If we have to choose, what are those boundaries within which I can choose and feel confident that it's good for me, those kinds of things. It's just part of the process as we improve the care delivery process.

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

Actually, we did discuss it. The examples around, for instance, a patient who might be presented, what is the institutional goals on care for or care plans for a patient with diabetes, and then being able to see the trajectory of health for that patient, based upon their current behavior. In the event that the patient then changes behavior, increases their adherence to drugs or testing or improve their ways, what is now their new trajectory of health. So, that really fit under the how do I compare question and the discussion that ensued, what standards to we need? We talked about, well, then any CQM, how can we make sure that has a patient-facing capability, so that a patient can be informed about where they compare to overall care and hopefully help to change how they about their health and their wellness. So, it was very much discussed.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

Okay, thank you.

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

Any other questions?

**Larry Wolf – Kindred Healthcare – Senior Consulting Architect**

Yes, Larry Wolf. So, in some of the quality discussions, this notion of patient-reported outcomes, used in the context of standardized surveys with validated, predicted questions and answers, you talked some about sort of patient goals and the need for measuring things against an individual's health; was there any discussion around these particular emerging quality measures and anyone's experience with them?

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

Yes. We discussed it and in the overarching themes document overall you'll see about 37 different discussion points and, we talked about the experience of care survey itself as a tool, not only reporting my experience and care, but could standards that were used to develop that questionnaire be broadened so that any information asked of a patient could be responded into the record in a standardized way. So, if the LOINC standard is being used, or LOINC is being used to generate an experience of care survey, what do we know about that now? Can that be modified to a consolidated CDA type of document where than information has been ingestible by the EMR and informing the clinician about that patient's perhaps health history, the patient's status of care, the patient's activity towards goals. So there was a lot of discussion about patient-generated data.

**Larry Wolf – Kindred Healthcare – Senior Consulting Architect**

So, I guess continuing on, because I'm on a roll here. So, for a while, going back a couple of years, there was a burst of enthusiasm about personal health records, until it turned out that there were no good feeds from any of the healthcare providers so it became completely a patient-created document or dataset, but clearly as we're starting to get standards in place, we can get personal health records 2.0 if you will, then the opportunity for patients to be tracking their own data starts to become very real and the need to communicate that information that they are tracking for themselves back to the providers records becomes all the more important.

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

That was very much discussed in the group. In fact, I think that the logical conclusion of successfully implementing view, download and transmit, is report or, give that information back. And then the next logical phase might be initiate data, where I'm now creating something on my own to be implemented; it might be my own results or observation, but it's initiated by the patient. So, there was significant discussion about how do we stage patient-generated data. The team all agreed that you cannot do effective care coordination or collaboration without the patient, it just doesn't work. Then we get to basically managing transactions of care instead of managing health and care. There will be… we will be discussing patient-generated data further, I think, as the week progresses.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

And so you know Leslie that the profound statement that you made there is I think sometimes we think of a transition outside of the context of the process and I think that's a very important point that we continue to consider, because the process of a transition in care has many elements that are part of it, too. So…

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

Yes, and speaking of transitions of care, I think that's a great segue over to Dr. Russell Leftwich, and Russ, could you take a minute and describe your background a bit and then go into your presentation?

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Sure. This is Russ Leftwich, I am… for 22 years practiced medicine in Nashville and then for the past 2 years, I have transitioned into the HIT world and informatics and I have served as the Chief Medical Informatics officer for the Tennessee Office of eHealth Initiatives, which is the state designated entity for

Health Information Exchange, and for a bit over a year, I have served as one of the co-leads, along with Holly Miller, of the Transitions of Care Initiative efforts in the S&I framework. So, I'm going to talk briefly today about where we have been the past year and where we have envisioned some of the gaps are and pathways that we need to follow. So, if I could have my first slide, and actually, the next slide.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

And Russ, this is Charlene. For kind of the broader education, and you'll kind of reflect on what's in Stage 2, too, or your views on that as part of the context?

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Yes, and that's really part of the pathway I think, and I think it's off to a good start with what's been proposed, to start filling some of these gaps. So, the S&I Transitions of Care Initiative convened early last year and developed use cases around hospital discharge and the closed-loop referral from PCP to a specialist and back to the PCP. In these use cases, the patient accessed an engagement with a key part of the use case and considerations for information exchange and the patient was always a recipient of the clinical summary and always a member of the care team and a participant in care planning. Patient instructions, both in the Meaningful Use requirement for inclusion in hospital discharge and as part of specialist's recommendations as well, were viewed as patient-centric and having appropriate detail that recognized health literacy, preferred language and patient preferences.

If I could have the next slide. Early in this initiative, a sub-workgroup convened around the Care Plan as a document and as a process, and it was apparent early in these discussions that Care Plan meant something different in different settings. There's the daily care plan that's traditional in inpatient care. There's a discharge plan of care, usually focused on the reason for hospitalization. There's a treatment plan for disease management and in the broadest sense that we identified, there is the concept of the whole patient care plan of the patient-centered medical home model. If I could have the next slide. Coordination of care was discussed as a concept, considering it as a comprehensive, all-inclusive process for an individual; and as a logical conclusion, there would be the concept that there would have to be a master care plan, sort of a dynamic blueprint for ongoing care of an individual. And the second logical conclusion was that there would need to be a defined care team, as is specified in Stage 2, a care team that is patient-centered and with roles of a care team member assigned with respect to that particular patient.

It was recognized that for different patients, in different settings, the makeup of the effective care team might vary, just as in team sports, the organization and structure of teams in different sports does vary, but there always has to be a roster and there always has to be assigned positions for the members of the team. From the standpoint of the information model for care coordination and a care plan, the model would be agnostic about the setting and about the educational requirements and job titles of individuals and we discussed the team lead might most often be a PCP, but in some situations, we envisioned there would be a specialist playing the role of a PCP or even a non-physician. Then the function of care coordinator or care manager might be a physician, it might be another professional or sometimes it might be the patient themselves or a parent or an adult child of the patient.

May I have the next slide. So, in an HIT-enabled world, the patient-centered care plan would need to be interoperable with systems of different organizations where different care team members are, including the patient-facing system and in the discussions around care plan and coordination of care, we recognized that a significant portion of the care team was out of scope of our use cases and for the transitions of care effort of S&I, and as a result of that, the care plan sub-workgroup produced a white paper on HIT enabled coordination of care that was partly responsible for the formation of the Longitudinal Coordination of Care Initiative and in the development of that paper, we posed the concept of a future state where the care plan would exist outside of any EHR system, in the cloud if you will, and it would belong to the patient whose consent would control access to this care plan in the cloud, and that care plan would be the source of proof for medication list, for problem list, for the allergies and intolerance list, and for advanced directives for things that ideally should really exist only in one place. And our ongoing efforts would be to create the interoperability between systems, including the information model that's required to reach that future state.

The current state is that a relatively small fraction of patients have a whole patient care plan that is in a single system and so this patient's other care plan elements such as discharge instructions or specialist recommendations need to interact with that care plan and that includes the non-physician specialist, therapist, nutritionist, behavioral health and those care plan elements need to update that whole patient care plan. If I could have the next slide. So it was the consensus of the Transitions of Care Workgroup that there were certain core data elements that were so important to coordination of care and to patient engagement, that they should always be part of the information exchange to transition all transitions. The core data elements are demographics, the active medication list, the active reconciled problem list and a list of allergies and intolerances to medication, foods and environmental substances. And except for the demographics, these data groups do correspond to the required data elements in consolidated CDA so, that the recommendations for Stage 2 are very much in-line with this. The next slide please.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

Russ, again, just clarify, there was a food allergy piece that was missing, is that kind of… is that what you just said?

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Well, the food allergy piece is missing from the recommendations in the Stage 2, it's not missing from Consolidated CDA. The allergy list in Consolidated CDA does account for all types of substances.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

So just clarify then, this is from the policy, because we had this discussion in the Policy Committee around… the focus the Policy Committee had was just around medication allergies as opposed to the other types of allergies that can occur. But what would be in the systems then? I mean, will they be certified for other types of… so can you clear that one up for me?

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Well my understanding would be that they would certified because the Consolidated CDA does include the foods. I'm sorry, the medications, but it would also allow the systems to include the food allergies and other allergies in that list. I would not think that would disqualify it.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

No, I don't… I'm just trying… this is coming in from multiple dimensions and I was just trying to get clarity about… I mean, if it's there, because what we try and do is a baseline at the policy level, but, I can see this could potentially bubble up then. Because we asked that question when we were doing the improvement to some of the other objectives, and I asked the question about other types of allergies and the consensus was, no, let's keep it focused, but this brings a different… and it's already there, then that's a whole different conversation if you will.

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

Right. This is Leslie. And it does… this is an example where the standards have been forward thinking and the Consolidated CDA will take in any allergies or intolerances if there. That's helpful to the vendors because if they certify that they can take information from the Consolidated CDA, then they have… they are able to address these issues. So, I think this is a great example of when we get so involved in standards that look beyond what maybe the policy has and make it easier for us to adopt ever-reaching objectives.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

Yep, yep, okay. So this… thank you, that's why we're doing this.

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

So, the core data elements are synonymous with the A-data elements. We also identified additional data elements that were seen as falling into the B and C categories; B-data elements being identified as those that were important in mini-transitions of care including those data elements called out in Meaningful Use Requirements, and although its far to extensive a list to detail, I'll point to a few examples where work is needed and is ongoing: smoking status and advanced directives, the presence or absence of advanced

directives are areas which are being addressed in HL7 to assure that data fits exist that align with the requirements in Meaningful Use Stage 2. In other words, there are data elements for advanced directives, but not that say they exist or they don't exist. Likewise smoking status, it's actually tobacco use and not smoking status, so, there is ongoing effort to align those things.

Some data elements that would seem to have particular clinical importance are only placeholders in the existing standards, diet and nutrition, as an example, would seem very important to many of the priority illnesses. It's certainly important in the obesity endemic in the U.S. and it appears that many individuals

think advanced directives means calling ahead for pizza.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

We could go there. Russ, I guess, just to affirm, this is a great catch, too. One of the requests coming from the long term care community was the ability to indicate the presence of advanced directives. So, again, another important piece.

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

So, the only mention of diet and nutrition in Consolidated CDA is discharge diet, which is only a text entry. There is work ongoing in HL7 to develop a functional model for nutrition orders, which doesn't exist, and to identify vocabulary standard for nutrition orders. The international vocabulary for nutrition orders has, I understand, been submitted to SNOMED and to LOINC, but currently those don't exist and that's obviously a gap that needs to be closed, so that that can be interoperable.

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

And Russ, this is Leslie, I don't think that we can overstate the importance of this, because with care coordination, we will be providing information for self-care, and care plans that include nutrition and diet, will be fundamental. So, not only do we need to do this at the order level for normalization at the EHR, but also, when we have a care plan that includes a patient, the things within that patient's control need to be standardized and harmonized in an accelerated fashion. So diet, exercise, smoking, drug adherence; these are the things that the patient will contribute back to that care plan, so I think this is great that there's a framework, but we need to really accelerate this effort.

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Right, and that is happening and it needs to be supported, I think. The C-data elements are those which were not deemed essential in the transitions of care use cases that we had developed in Meaningful Use, but they are certainly essential to effective care coordination, and I know are being started to be addressed at the Longitudinal Coordination of Care Initiative. If I could have the next slide. The transition of care group identified demographics which go beyond those specified in Meaningful Use, and we think should be considered for future inclusion. It was felt that the PCP and care team roster should be part of the demographics, additional data elements such as emergency contacts and identified caregivers, cultural determinants of care like practiced religion, educational level and electronic end-point addresses for patients and caregivers were important gaps that were identified. If I could have the next slide. Reconciliation…

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

One question on that. We've had the discussion, I think, in terms about race and ethnicity and the level of detail there, was there any concept discussion on was more specificity needed or did you talk about that at all?

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

I think we did, and I don't recall the details. We did have discussions about national origin being perhaps something that should be distinguished as one of those cultural determinants of care, so, we did have some discussion around that, I don't think we had a thorough discussion probably of what needs to be considered.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

Okay. So, Leslie, you know where I'm going with this, we're trying… we are in Christine's group too, so, there's overlap and we just need to make sure that we're harmonized of the different needs for the different purposes across the different groups, right?

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

Yes. I think that there are proposals coming forward that have more granularity but is also mindful of the provider's needs, not ask 400 questions. So, I think there is… I think that was mine to do, and I'm still waiting on that.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

Okay, all right. And I think… George is on the call, you saw the public health stuff coming down yesterday, so, lots of different piece parts coming in that we need different… that sweet spot of that data set that transcends all the areas we're talking in is really going to make a huge difference as we drive, I think, into Stage 3. So, okay, sorry, but this is great information.

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

So, reconciliation was recognized as really critical in care coordination for medication lists and problem lists. There was concern because there is nothing internal to a list that indicates that it's a reconciled list. In other words, a medication list looks like a medication list; whether all specialists would reconcile medication lists or even PCPs would always reconcile them at the time of the creation of a clinical summary document was considered a risk, because the date of the summary document may not be the date of the reconciliation, yet it's the only date that's on the document and receiving systems may not be able to resolve this, which could be particularly important to patient-facing systems; you get two different lists that were created on the same day, which one is really the most recent one.

**W**

That's a great catch.

**Eva Powell – National Partnership**

Hey Russ, this is Eva. And I'm not sure this is the right place to put this, but, one of the things I brought up on the patient engagement call the other day was this notion of, in the course… part of care planning and care coordination is identification of gaps between what the patient has and what the patient needs. And that can apply to a lot of different things, and it can actually, I guess, apply to just about everything, but, from my perspective, what seems to be missing in that is being able to collect information about what special needs the patient might have, particularly with regard to psychosocial kinds of needs; like, they don't have support at home or they've got someone at home, but that person's limited in their capacity to do X, Y or Z. And I don't know that that necessarily fits under reconciliation, but, it kind of does, in the sense of you're looking at what is the difference, if any, and hopefully the goal would be not to have any difference between what the patient has and what the patient is getting, or is set up to have happen, or is coordinated, so to speak. So, is there a place to put certain elements such as psychosocial elements, whether that's assistance in getting medications because they can't afford them, or transportation to the next clinic appointment, or something like that?

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Right. We certainly discussed the importance of those factors; I can't say that we had a definite place to put them. We discussed them…

**W**

Russ, I think we put them under culturally sensitive care and we did have a lengthy discussion about them and wanted them included in that section.

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Yeah, that's what… we had envisioned them being literally under demographics, the factors like that Eva, that were important to pass on in a transition to the next care team members who are going to be in the

next care setting. We had a lengthy discussion. We didn't know within our group what the data sets for those things may be, but we felt like they should be part of the demographics.

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

Yeah, that makes total sense to me. Yeah, great, thanks.

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

So, with respect to the reconciliation, we felt there should be data elements that indicate reconciliation, the reconciliation date and responsible clinician, so that regardless of the definition of the process of reconciliation, the artifact that's produced needs to be stamped as such. If I could have the next slide. We recognized some important differences between the discharge summary that is the discharge summary section of the Consolidated CDA, which is built to conform with Joint Commission and CMS requirements, and the discharge summary as a clinical summary document that we conceived of in our workgroup and that is really referred to in Meaningful Use, because this clinical summary at the time of discharge, has a time zero requirement that's not really a traditional workflow for discharge summaries, and it's most important content, we felt, was those core data elements and the continuity of care information that would be in that summary. It was the consensus of our group that the data elements in this clinical summary should be selected by the clinician, not automated in some IT process, in order to avoid overload and because clinicians really communicate by which data they select to send and too much information is often the equivalent of no information at all, because it's just overwhelming. And that's certainly true for patients getting summaries as well, I think.

If I could have the next slide. Patient instructions are included in Consolidated CDAs, an optional free text section. Our workgroup concluded that the patient instructions probably should be a separate document that would always include the core data elements in that list, the demographics, the allergy list, the problem list; but would allow for a level of detail that was appropriate for patients and inappropriate as part of a clinical summary for other providers. This would really facilitate instructions in the preferred language and facilitate update of a self-management plan with these instructions. It would not replace sending a copy of the clinical summary to the patient, but would avoid the instructions being lost or de-emphasized in a really complex clinical summary where the instructions are somewhere down at the end. So, patient instructions exist only as a free text entry, but there's a question of whether, going forward, whether there should be a framework created that would facilitate interoperability when patient instructions are exchanged,

Can I have the next slide? Care plan elements do exist in Consolidated CDA, but they're probably insufficient for effective care coordination. The core data elements are included, as I've said, as are an assessment section and a separate assessment and plan section and a plan of care section which is intended as well for discharge instructions and a functional status section. There's also a section for goals that are a free text entry, but there's not a structure for relationship between goals and problems and interventions, which we think is essential to care coordination. May I have the next slide? I mentioned we concluded that the list of the care team members is going to be required going forward is really foundational for care coordination. The concept of a patient-centered care team that extends beyond an institution or an episode of care is really a new concept. The HL7 structured documents have this concept of a care team, but that's within an institution.

We really feel like there should be a specific minimum data set for the care team members and this may overlap in part with the provider directory minimum data set, but it should also include that role of the care team member with respect to this particular patient and should probably include links between the care team members and the problems on the problem list that they are associated with. I think it should

also be considered whether this should be the place to designate the access permissions of a care team member with respect to the patient's care plan; in other words, if you only access, or can they update parts of it. If I could have the next slide. So, the requirements for that comprehensive care plan that's envisioned, that are gaps in existing standards include the functional requirements for care planning which Larry Garber, I know, is going to talk about and the interoperable standards for data that is currently free text, including the vocabulary sets for data and processes associated with the coordination

of care. So, that's all I have to say and I think Larry is going to pick it up with the longitudinal care plan efforts.

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

Thanks so much Russ. This is Leslie. I would like you to keep a question in mind and I'll ask for your answer or recommendation in the summary section, but, if you were to prioritize the next level of S&I framework work to be done in support of patient engagement and care coordination and collaboration, what would that be? So, if you could keep that in mind, and then I'll also ask both you and Larry that as we summarize the end of the session. So, Larry, please take it away.

**Greg Pace – Social Security Administration – Deputy CIO**

Before Larry does that, this is Greg. I have a question on the presentation where you talked about functional status. That was about three pages back under care plan elements. Is there additional detail on just what would be included in functional status?

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Well, that is a fairly well defined section in the Consolidated CDA. There is a functional status template that includes structured data elements, not just free text, and I can't say that I'm familiar enough with it to tell you the range of that value set. But, it is a well-developed section in the Consolidated CDA.

**Greg Pace – Social Security Administration – Deputy CIO**

Okay, I'll take a look at that. What I was looking at specifically was there anything in there about functional status in terms of disability?

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Yes. It does encompass that.

**Greg Pace – Social Security Administration – Deputy CIO**

Okay, thank you.

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

Any other questions? All right, thank you and I apologize for not asking that earlier. Go ahead Larry.

**Lawrence Garber – Reliant Medical Group**

Thank you. And I see you'd asked me to introduce myself before. So, I'm Larry Garber. I'm a practicing internist here in Massachusetts at Reliant Medical Group. We were formerly called Fallon Clinic. We're a 300 provider, multispecialty group practice. I led the implementation of our electronic health record, which 96% of our physicians qualified for Meaningful Use in the first three months of last year. Also, I architected SAFEHealth, which is a Health Information Exchange that uses an opt-in consent model. It's a federated edge proxy-server model that's been live for the past three years and sustainable for the past three years. And then I'm leading the Impact Project as well, which is one of the ONC HIE challenge grants for long term post-acute care. It's improving Massachusetts post-acute care transfers where we're working on engaging the post-acute care community and connecting them to the state's health information exchange.

Next slide please. So, through all of this work I met up with Drs. Leftwich and Miller and we learned about the work that they had done with the ToC and recognized that they built a great foundation that we wanted to build on top of to engage the long term post-acute care community and really think more in terms of a longitudinal coordination of care across the continuum of care. So, with the group of folks that you see on this slide, we created the longitudinal coordination of care workgroup in the S&I framework, to really pick up where the work that Russ and Holly and others had done, and continue to move that forward.

We broke up into three sub-workgroups; the LTPAC care transitions workgroup is focusing on documents that are needed and data sets that are needed during the various transitions of care, among the acute and post-acute care community. We have another group that's focusing on the longitudinal care plan and

another group that's focusing on patient assessment summaries, like MDS/OASIS Care Tool. And in the course of this, we recognized that the longitudinal plan of care or the master care plan, or the whole patient care plan really permeates all of these and has places in all of these and we felt it was necessary to really have a common understanding of what it is that a master care plan or a whole patient care plan is and how it interacts with all the things that we are doing. So, what I'm going to present to you is actually the visual model of how we visualize the longitudinal coordination of care.

So, next slide please. So the way it starts out is that our patients have health conditions; some of these are active problems that are acute problems or chronic problems like diabetes or congestive heart failure, and then there are problems that they don't have, but they're at risk for. So, they're at risk for falling or they drink so they're at risk for car accidents, or they're at risk for illnesses, you know, they've had cancer in the past, there may be a recurrence or maybe a medication problem. So, when you're thinking about our patients, you're thinking about what they currently have and what they're at risk for developing. Next slide please. So, these risks come from various different places; there may be disease progression, they have diabetes, they're at risk for atherosclerotic heart disease or diabetic nephropathy or other illnesses related to that. Or there are side effects from the medications that we're treating them with, they're at risk for problems with their kidneys, their liver or whatever; and those are things that we need to be thinking about when you think about health conditions.

And that there are a lot of other risk factors, so based on a patient's age, they're at higher risk for certain cancers or their gender puts them at higher risk for certain things; their past medical histories that are significant, you know, as I said, a history of cancer means that they're at risk for recurrence. They've had abdominal surgery in the past, they're at risk for bowel obstruction and those again are risks that you have to think about when we're making decisions with the patients. Their family history, their genetics, their race, their ethnicity may predispose them to certain diseases and their exposures and their lifestyle, whether they smoke or drink or in their work are exposed to radiation or maybe their sexual activities increases their risk for STDs or something like… or pregnancies. Maybe their diet or poor diet or exercise or lack thereof puts them at risks for illnesses and diseases. Their environment, what their home is… do they have rugs that they can trip over; those can impact what they're at risk for. And also test results or physical exam findings, if they have some… they sunburn easily or they have a mole that looks like this could be a dysplastic nevus and they're at risk for melanomas. So, there are lots of things that predispose people to certain risks that we have to be thinking about.

Next slide please. Now, what to do you do when you know all of these conditions. You have to really work with the patient to determine what are your goals. And I want to distinguish the goals that I have here in purple from sort of a higher level goals that Leslie had mentioned earlier. So patient's themselves have high level goals, which I've listed here in red as, it's their values, it's their priorities, you know, what are their wishes. Some of these are written down in their advanced directives. Some of them are understood as their readiness to change. And then, what are their expectations for their care or for their life. So those are among what we call decision modifiers, in other words, as you've identified health conditions with the patient and you're working with the patient to come to decisions about what goals you want to have for those health conditions, you have to take into account these decision modifiers. What's the patient's status? If someone's functional status is such that their bedbound, their prognosis is that they're going to be bedbound for the rest of their life, you're not going to have a goal that they're going to be taking walks three days a week on a treadmill, if that's not a realistic goal.

So you have to create the goals with the patient based on in part, what are realistic goals based on their functional status, their cognitive status, what their prognosis is, etcetera. Also, you have to take into account the reality of, what are the resources that are available to a patient, what is their support, do they have insurance, do they… where do they live, what's their transportation realities; those also modify what goals you can realistically set with the patient. So, in the process of shared decision making with the patient, decision modifiers are taken into account while thinking about the health conditions as you're establishing goals. And then with the goals you're thinking about, what are the outcomes you're looking for, what are the barriers that you need to think about, and how do they relate to the health conditions.

Next slide please. Now in addition to that, helping make the decision, besides the patient there's also decision support. So whether this is electronic, whether this is just knowledge that's within our brains;

those evidence-based guidelines help us in determining what these goals should reasonably be. Next slide please. Now, after you've determined with the patient what the goals of treatment ought to be, you have to determine what the treatment will be. What are the interventions, what are the actions that are necessary to achieve those goals? And again, you're taking into account the decision modifiers that reflect the patient's values and statuses. Also, we have to think about their allergies or intolerances, we're not going to give them something that their allergic to as one of the interventions.

Decision support can help with the decision making about what interventions are appropriate. And these interventions are numerous things, so, they're medications, it's wound care, dressings, it's exercises, diet, maybe it's testing, you know, a goal may be to make sure that their cholesterol improves, or their sugar is doing well, so you're going to be monitoring the sugar, doing sugar tests. There may be behavioral changes that you're expecting. There's also… some of these are actions, so someone's a diabetic and part of the plan is that when they're sick, and they're having diarrhea and can't eat, this is what you're supposed to do with your medications that day, or this is when you're supposed to call for help or this is when you're supposed to go to the emergency room, this is who you're supposed to call. Or maybe the intervention is actually education or physical therapy or whatever. And those interventions have start dates and stop dates and frequencies, who are supposed to do these interventions, where is it supposed to be done, what are their instructions or parameters for which these are carried out; what are the supplies that are necessary in order to do these interventions or actions. And then these interventions and actions have statuses that are monitored as they go forward. And those interventions relate back to the goals that they're responsible for and they relate back to the health conditions for which you're trying to intervene on.

Next slide please. Now, these interventions can have side effects. Actually, I guess this is showing funny. One more slide. Okay, and they have outcomes. So, as the result of these interventions and actions, there are outcomes that affect the progress toward the goals. They also change the health conditions; maybe you're actually improving someone's caring their acute problems and as things go on, there's also changes to the interventions; as someone's exercise capacity improves, maybe you change the intervention so that they can do a more aggressive, higher level of exercise. So, next slide please. So this is a continuous, ongoing process, this plan of care; the health conditions that they have, the goals that you've collaboratively developed with the patient, the action plan with interventions that you've collaboratively built with the patient are continuously being updated over time, with shared decision

making.

Next slide please. Now there's a many to many relationship with these, so, it's not… that's one of the problems the way the Consolidated CDA is laid out right now, is that it's, at least for the plan of care, that it's really somewhat flat, but this is really, there's a multi… the relationship between health conditions can have multiple goals and a single goal can relate to multiple health conditions and that there can be multiple interventions or actions that relate to one or more goals and one of more health conditions. Next slide please. So, as an example, I guess the animation didn't work here. So, let's say you've got someone with diabetes and hyperlipidemia. So, they're at risk for atherosclerosis and so you set up goals with the patient, you say, okay, we want your sugar to be below a certain level, your cholesterol to be a certain level, we want you to exercise a certain amount. And then you work with the patient and discuss that, I think we're going to give you medications, those are your interventions that we're going to have you take metformin, something for your cholesterol, we're going to have you walk regularly and want you to test you sugars, we want you to test you cholesterol.

Now, the diseases can progress, so… one more, okay, and the next one. All right. So now that you've given the patient some medications, there could be side effects. So the side effects are that it can affect your muscles or that you can have diarrhea or develop hepatitis. So now you have to think about, one more slide please. So now you have to think about the fact that you want, can you go back one, I'm sorry. So now you want to think about the fact that you have to monitor… that you have a goal of keeping the liver and muscle tests normal, and so now as a result of that, we have to do testing for the liver tests and the muscle tests. So, this is a continuously evolving plan of care that multiple people participate in.

Next slide please. Now what feeds this, what gives feedback to this, are patient assessments. Now these assessments are done by multiple members of the team. So the first member is the patient and their family, they are giving feedback as to how things are going in terms of their progress towards the goals in terms of how they're doing with the interventions, in terms of how their health conditions are going or whether their decision modifiers are changing. Those come from the patient and family. Physicians give input. The primary care physicians, the consultants, other non-physician providers are doing assessments, continually feeding this process. The nurses are, other care coordinators are continually doing assessments, updating the plan of care and the status.

Next slide please. And how does this fit with the patient-centered medical home. Really what the patient-centered medical home is, is it's a way of monitoring the plan of care and finding out when people are deviating from the plan of care. So, when someone is not getting the testing done, when someone is in need of procedures or of education, whose sugar is not doing well, or their cholesterol's not doing well or their weight is not coming down; then they're monitoring this plan of care and that these are deviations or they're not expected improvements and as a result, they intervene. They have the ability to see what's going on from all of the assessments and what the expectations are, and they can track down patients, between visits, to make sure that they get what they need.

Next slide please. Now, the plan of care as Dr. Leftwich talked about, is the fact, it's something that means different things to different people. So while there is a single, unified master care plan; what is presented to patients may be different than what's presented to a physical therapist, the language may be different, the vocabulary used may be different, the subset of information may be different, the way it's presented may be different, certainly the setting that it's presented will be different. And so, everybody is looking at the same shared master care plan, but they're looking at with the pieces of information that are relevant to them and in a format that's understandable to them.

Next slide please. So this is what I guess you had asked me to talk about, which is, how does this relate to Meaningful Use and the Consolidated CDA. And, so in the bottom of the screen there, I have what's currently in the Consolidated CDA, the CCD document sections that are relevant to the plan of care. So, there are… the part that's broken out on the bottom there is specifically the plan of care template section, section template, and as you can see, one piece of the elements there is the goals, so that's where you can specify goals in the Consolidated CDA. And so, it's fairly bare bones as it's currently defined in the Consolidated CDA. Next slide please. But now all of the elements that are in the CCD map back to pieces of the master care plan. So, they all have a place to be filed.

Next slide please. But the converse isn't true; in other words, there are multiple data elements within the master plan of care, in the vision that we've created, that are not sufficiently specified or are completely absent from the CCD and a lot of it has to do with the relationships between the conditions, the goals and the interventions. Those are really almost completely missing, some of the specifications for barriers, some of the pieces of the decision modifiers are missing. Now, I should say that there is currently just released, I think a week or two ago, there's another ballot on the consolidated CDA and HL7, which is balloting on some more refinements to the functional and cognitive status, as well as wound status; so, those are currently being balloted. So, as we speak, there are enhancements being done to the Consolidated CDA. So, this is a moving target this year.

Next slide please. So, how do we get to where we need to be? Next slide please. There is some work, as I said, that's currently under way. There's balloting through HL7 that's updating some components of the Consolidated CDA and the CCD documents, to better reflect the needs of the plan of care. And that's important work that needs to continue. There will be balloting now, and there will be balloting either at the end of the summer or beginning of the fall, and it would be my hope that the work that's being done to enhance the Consolidated CDA can be targeted with what you're planning to define, or expect from Meaningful Use Stage 2, so that these can be part of the expectations.

Next slide please. So, in the Meaningful Use Stage 2, I would encourage maybe switching some of the vocabulary that's used in the document, where there's a lot of emphasis on mentioning goals and instructions and instructions are really sort of a vague subset of what's really health conditions, goals and interventions and actions, as well as some of these decision modifiers, which one can argue whether or

not they're truly part of the plan of care, but they certainly are important in the process of developing the plan of care. So, I'd like to see that we try to come up with a more standard vocabulary that we can all agree on as it's being presented to Meaningful Use Stage 2, that people are encouraged to use these pieces of the Consolidated CDA that reflect what's in the care plan and that we, in particular, focus on improving some of the pieces that are a little bit weak, taking advantage of what's being balloted this year.

Next slide. And then, we should continue to support the efforts in the S&I framework, to further define what needs to be in the plan of care, and bring those elements through HL7 balloting, into the Consolidated CDA, so that these can be part of Meaningful Use Stage 3. Next slide please. And also, I'll throw my plug that, it's also we want to make sure that we improve the vocabulary and data elements that are needed to support the long term post-acute care community, which are right now, well under-represented in the current definitions of the Consolidated CDA, that there have been multiple pieces that we've identified that need to be enhanced or further defined, in order to meet the long term post-acute care community. Next slide. We also want to encourage the participation by vendors, as well as other organizations, healthcare providers to support and be involved in the S&I framework over the next couple of years, to help work defining these so that they are useable and implementable standards that we can all use in Meaningful Use Stage 2 and 3. And last one. So that by the time we get to Meaningful Use Stage 3, we truly can support longitudinal coordination of care across the entire continuum of care. Questions?

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

So Larry, this is Leslie. Thank you so much for all of that work. What I've heard, and I think the committee has heard, is there has been a considerable amount of work being done today, in transitions of care and longitudinal care, and that there's emphasis needed in harmonization and interoperability and much of the work that we're doing today is really focused around more of the binary structure, or the structure between and relationship between singular care providers or institutional care providers and that gaps exist when we start to look at a shared care plan, which is truly a collaborative care model or a care record, that this might fit on top of or in addition to the current functions we see in an EHR; but, you've articulated, both of you articulated such a great vision for how technology can be used to help to improve the quality of care, not just as a transaction of transition, but truly a collaborative care model through the use of technology, so I appreciate very much the work that's been done. So, I think that the question is, I think Larry answered his side of it, which he thought needed to be continued in the S&I framework, what needs to be done in the future, and I'll open that up to Russ to see if you have any additions to comment on that and then we'll turn it over for a couple of comments. Russ?

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

And Leslie, I do have a clarifying question, too.

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

Why don't you go ahead with that first.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

And this is just… and you may have said this Larry and I just missed it, that automating care plans, even in acute care, because of all the different factors that you spoke to, has always been a challenge because of the many to many, one to one, da, da, da. And, I had looked at the current CDA, just lists care plan as an element, it doesn't put that infrastructure; do you see how we're going to do that? I mean, there are standards out there that start to employ goals, interventions and that type of thing, but it gets pretty complex.

**Lawrence Garber – Reliant Medical Group**

Well, I'm not part of the Dolan family, so I won't… I'm not privy to knowing how this should be done, but, what I can say, we spoke to Gay Dolan about it, and she said, you know, the section that's in the CCD in the Consolidated CDA, that says care plan, is really just supposed to be a list of… these are the tests that are ordered that are out there that haven't been completed. Or, these are the things that are supposed to get done that haven't been done and it really was never intended to be the full plan of care. And so, I believe the vision will be that either there will be some significant changes to that, or more likely, there will

actually be a new section that would be created that truly reflects the multidimensional nature of this, as opposed to the flat nature of what's in there right now.

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

So (indiscernible) you can say that perhaps moving from the EHR is informed by, or informing a care plan, a shared care plan.

**Lawrence Garber – Reliant Medical Group**

Right, so this… all of the data elements here map back to other pieces of a standard electronic health record really, almost all of them. Everyone's got problem lists, everyone's got allergies listed somewhere and so it's… or family history, and it's a matter of mapping them into views, different views of the care plan for the person who needs it, and then figuring out where the gaps are in terms of things that aren't collected. Really, goals and barriers to goals are things that most EHRs do not capture very well right now and so, we're thinking that with this sort of a master vision, it'll help the EHR vendors build towards what we all really need to use to take good care of our patients, and then to communicate among others.

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

Great. I should be mindful because we still need a couple of minutes for comment. So, did you have anything you wanted to add to that Russ?

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

I guess the single most important thing to enabling everything else, I would say, is getting that care team roster that has identity information and electronic contact information and their relationship to the patient so that everything else can happen.

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

And the patient's themselves.

**Russell Leftwich, MD – Chief Medical Informatics Officer, Tennessee Office of eHealth Initiatives**

Right, always, yeah.

**Eva Powell – National Partnership**

And this is Eva, just a quick mention that the framework you used Larry to describe that, which I agree with Leslie it's fabulous, that mapped very closely to the work done by NQS on the quality data model and when you think about quality measurements for care coordination, which largely doesn't really exist right now, but is going to have to, I think you really set up a nice framework from which to work towards that as well.

**Lawrence Garber – Reliant Medical Group**

Thank you. And I should mention, I presented this to 20 physicians and care coordinators and case managers that are part of an ACO, and they felt that this is exactly in the line with what they were thinking as well.

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

I think this is wonderful work, it demonstrates that EHR in itself is not enough, that we really need to look at collaborative care and care coordination as a discipline and a distinctly different need in care today, but also that can use existing technology and standards to inform them. So, I'd like to open up for public comment.

## Public Comment

**MacKenzie Robertson – Office of the National Coordinator**

Operator, can you please open the line for public comment?

**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 1-877-705-2976 and press *1 to be placed in the comment queue. We do not have any comments at this time.

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

Great. Well thank you all for participating, we heard from the rock stars in the standards and care coordination groups and I very much appreciate the work that has been done and all of you that have been able to participate today.

**Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs**

I echo… this is Charlene, I echo Leslie's comments and Leslie, thank you for pulling this together, it's been very informative and a lot of terrific content.

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

Great, thank you. MacKenzie, I think we're done.

**MacKenzie Robertson – Office of the National Coordinator**

Great. Thanks everybody.

**M**

Thanks a lot.

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

Have a great weekend!

**MacKenzie Robertson – Office of the National Coordinator**

All right.