

**Clinical Quality Workgroup**  
**Draft Transcript**  
**April 7, 2011**

**Presentation**

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Good afternoon, everybody, and welcome to the HIT Standards Committee's Clinical Quality Workgroup. This is a Federal Advisory Committee so there will be opportunity at the end of the call for the public to make comments.

Let me do a quick roll call of the members. Jim Walker?

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Here.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Karen Kmetik? David Baker? Anne Castro?

**Anne Castro – Blue Cross Blue Shield South Carolina – Chief Design Architect**

Here.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Chris Chute? Bob Dolin? Floyd Eisenberg?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Present.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

David Lansky? Gene Nelson?

**Gene Nelson – Dartmouth – Prof., Community & Family Medicine & TDI**

Here.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Eva Powell? Philip Renner? Danny Rosenthal?

**Daniel Rosenthal – National Quality Forum – Senior Advisor, HIT**

Here.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Joachim Roski?

**Joachim Roski – Engelberg Center for Health Care Reform – Research Director**

Here.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

John Derr?

**John Derr – Golden Living LLC – Chief Technology Strategic Officer**

Here.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Tom Tsang? Rosemary Kennedy? Did I leave any member off?

**David Lansky – Pacific Business Group on Health – President & CEO**

It's David Lansky, Judy.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Oh, David, great. Thank you. With that, I'll turn it over to Jim Walker.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Good afternoon. It's good to have all of you on. We have a lot of exciting work to do, and as always, too little time to do it so we want to get started today and keep going hard. The agenda is that we're going to first talk about the work plan, which is sort of the operational version of the charge to the workgroup. Then, Floyd is going to take us through the first part of an explanation of the quality data model that NQF has developed to help manage measures and will be continuing with that in the next meeting also.

With that, let's turn to the work plan; it's the Excel spreadsheet. It is an attempt, as I said, to get agreement at the beginning and clarity on the tasks before us and the deadlines we will need to meet in order for our work to be useful and to be timely enough that it supports HIT manufacturers and implementers as they try to put the measures into use. So we start with the tasks. I think the ... all of this is for discussion, but what we've tried to do is get the tasks that we were aware of down in writing and make estimates about the timelines, deadlines, that we would need to meet, but all of this is genuinely up for review. The goal is that we come out of this discussion with the shared understanding and commitment to what we need to do and when we need to do it so we can get started.

The first task is to review the experience of manufacturers and users with the MU-1 measures and particularly the models that we've used, the standards, and the vocabulary sets that were available to support them, or needed to support them. Next, we're going to start with a review today of the quality data model and particularly address these questions, although there may be others that you're aware of. One is: Is this adequate for measuring high-valued care processes and particularly closed in all their dimensions including patient involvement, transitions of care, and ability to track care over time. Then, what vocabulary sets would be needed to support the data model, and then we also want to talk about any recommendations for ONC regarding management of the QDM contract. What kinds of deliverables and timelines and other issues would be appropriate.

Then the next three tasks are to look at specific categories of measures that address transitions of care, care across multiple venues, patient- and caregiver-reported measures, and then longitudinal measures. You see under each of those—I think three of the primary questions, although, again, there may be more and we may want to eliminate some of these, are conceptual clarity, what vocabulary sets would be needed. What would the appropriate clinical summary standard be—either C-32, one of the CCD document types, or perhaps more generally, the CDA architecture and CCR.

So, I'd like to entertain discussion on tasks and deadlines. You can see the deadlines in front of you; there's probably no point in me reading all of those. We've tried to think carefully in terms of a timeline that makes sense so that users would have some real opportunity to put these things into use by the middle of calendar 2013.

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

Jim, I just wanted to let you know I joined and maybe I can just add a few other introductory comments. Everyone, I have the pleasure of co-chairing this with Jim, and again, welcome. Just the way I think about this work that Jim has outlined is it's a chance for us to work on mechanics, work on the blueprints, in parallel with in some cases but also in advance of the introduction of new and innovative quality measures in future stages of the government's program. I think everyone on this call, probably is interested in moving toward measures of transitions of care and patient and caregiver-reported measures, and longitudinal measures, and this is a chance to think about well, what needs to be in place to make sure that when we do have measures in those areas, we got that infrastructure to support it? So I look forward, very much, to the discussion.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Thanks, Karen. That's great. Anyone have thoughts about things we need to add, remove, nuance, change?

**Joachim Roski – Engelberg Center for Health Care Reform – Research Director**

Jim, a question for clarification: Starting on row 11, transitions of care and then patient- and caregiver-reported measures, and the longitudinal "delta" measures, is this a translation exercise, meaning these measures exist but they don't exist in this format yet? Or are these new measure concepts that have been identified, that need to be developed and then translated into these categories?

**Tom Tsang – ONC – Medical Director**

Jim, maybe I can take that question. Thanks everyone for participating in this new version of the CQ, the Clinical Quality Workgroup. I want to acknowledge Jim and Karen's leadership also, and their commitment to this process to making things really work over the next few years—at least for this year. So, Joachim, I think you were involved in some of the preliminary discussions from the tiger teams, from the other Quality Workgroup, from HIT PC, so these notional measures are, as you said, some of them are conceptual, some of them are in the testing phase. I know ... and Gene Nelson and his group are actually trying to test out the patient-reported outcome measures, but there are some methodologic challenges in that. The same thing goes with the other two areas, where I think what we're trying to do is really create a glide path, where we can actually see what measures those that are recommended by experts in the field and thought leaders, could actually be utilized for either 2013 or 2015.

**Chris Chute – Mayo Clinic – VC Data Gov. & Health IT Standards**

I'm sorry, I missed the roll call but I do have a question on this. In terms of the vocabulary sets—obviously that's a predictable question that I would ask—I think we all appreciate that there are really some sequential dependencies here and these timelines are significantly aggressive. I think it would be a disservice to the providers as we heard in the Vocabulary Workgroup testimony if we provide those as essentially spreadsheets or laundry lists of terms outside the context of any coherent or cohesive coordination around the problem of vocabulary sets, and their derivation and linkages to source vocabularies. And their management as resources that would be available to providers across the country. I know Floyd has devoted significant energy and emphasis to this problem, but from a Standards Committee perspective, I don't think we reached closure on that, and yet it's obviously a critical path dependency in this sub-working group.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Good point, Chris. So that particularly the August 2011 deadlines are more in the nature of fish or cut bait deadlines than jam it through whether it's ready or not. So I think one of the decisions we're going to need to make in terms of our recommendations—we hope for August—is which, if any of these, could really meet these various time marks and be ready for use in 2013? Or is it the case that all of them will need to be 2015 and we'll need to plan on a scope of work to achieve even that. Does that help?

**Chris Chute – Mayo Clinic – VC Data Gov. & Health IT Standards**

Yes.

**David Lansky – Pacific Business Group on Health – President & CEO**

Jim, I wanted to add another layer to this, maybe to the spreadsheet. What's novel about a lot of this work is that it takes us out of the relatively comfortable zone of particular EHR data set being manipulated to develop quality measures. There are either longitudinal or cross-platform data integration requirements for some of these. Part of that is the patient-source data obviously comes from the patient and may or may not come through some EHR that's part of the ... program and the longitudinal data may or may not come from the same single data system at time one and time two. So we have both the kind of measurement methodology issue of how do we define a blood pressure time one and a blood pressure time two, and what's the delta, and how do we interpret the delta, and developing standards around all that. But then we have the question of acquiring that data from multiple systems and where is the integration computation going to happen? I think it may be useful in the rows of the spreadsheet,

somewhere to have a row that is about sort of platform issues and data acquisition issues that are going to be contextual or set the context for some of the standards and methodology questions that, in a sense, comes second once we have some understanding of the architecture of where this data comes from and what we know about the data.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Great, okay. So the two would be source of the data and, to speak crudely, location of the calculations.

**David Lansky – Pacific Business Group on Health – President & CEO**

... I just put in the source question; that some of the sources may be, I'd call them nontraditional or non-EHR based.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Right, but in terms of—was the second point that the calculations similarly could probably not be counted on, on being done in an EHR.

**David Lansky – Pacific Business Group on Health – President & CEO**

Right. Or the question may come up which EHR does it, or who's the authoritative source for the calculations.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Okay. Great, thank you. That's an interesting question. So you think in terms of logical priority, they come before which of the ones that are there?

**David Lansky – Pacific Business Group on Health – President & CEO**

I could probably fold it into conceptual clarity, as a subset of conceptual clarity. And maybe out of conceptual clarity may come some new paths that we need some SWAT teams to think about.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Okay.

**Gene Nelson – Dartmouth – Prof., Community & Family Medicine & TDI**

A question for clarification under quality data model review, the first row underneath that, adequate data model for measuring high-value care processes, is that the outcomes of the care processes as well, speaking to value?

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Yes. Good point. We'll include that.

**Gene Nelson – Dartmouth – Prof., Community & Family Medicine & TDI**

Another question: Would it be useful or desirable or possible to have an agreed-upon conceptual definition of what high-value care is?

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Yes, absolutely. That is—it's an attempt at standard code for reportable quality and lower total cost, but that's worth discussing whether that's a reasonable definition or not. Actually, in my mind, it includes patient and clinician satisfaction. That will be reportable quality, decreased unit cost of evidence-based care, patient satisfaction, clinician satisfaction, but that probably needs even more discussion than some of the rest of this. What do we mean by high-value care? Or what do we mean by our goal?

**Gene Nelson – Dartmouth – Prof., Community & Family Medicine & TDI**

Probably having a working conceptual definition of that would be helpful so we have a shared understanding of that term.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Other thoughts or any other suggestions regarding high-value care? Is that a useful construct, if we define it? Any other thoughts about the tasks? Tom, does this still represent a reasonable approximation of our charge as a workgroup?

**Tom Tsang – ONC – Medical Director**

Yes, definitely. Just keep them coming. They're great suggestions and I think David Lansky made really good points, which we had been discussing but I think we had kind of lost track of those two issues that David had brought up.

**David Lansky – Pacific Business Group on Health – President & CEO**

Jim, I have one other suggestion to think about as we get into it. To avoid the boiling the ocean problem in dealing with vocabulary sets across a really large landscape and so on, while we may have to do that and sort of parallel, it may be worth picking one or two tracer measures for lack of a better term, that would test or stress the issues that you've sketched here. And work through them sort of beginning to end, at least one path so we understand the kinds of issues we're going to run into as this plays out. I took the example of longitudinal change in blood pressure as just an example. You could take and work that all the way through and say, what are all the ramifications of implementing that kind of a measure, where would standards be needed, and so on. What unexpected issues arise if you play it out? Rather than trying to do everything in a continuous sweep, we may pick off one or two and work them up first, then come back to the full thing.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Alright, yes. I think that's an excellent idea. We may find ourselves working in both directions but still, to get all the way through—what are you're thinking one example of each of those transitions, patient-reported and longitudinal measures?

**David Lansky – Pacific Business Group on Health – President & CEO**

Yes, exactly. Great.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Which means—we don't need to do it now, but if someone has it now that's fine, but it would be helpful then if people in the workgroup could think of example measures in each of those domains, or whatever they are, that would exercise us usefully. Sort of present many or most of the issues that we'll need to meet so that we're reasonably comfortable that we've done a good work-through.

**Tom Tsang – ONC – Medical Director**

Jim, I can volunteer to create a straw man framework for everyone with one or two suggested measures from the HIT Policy Committee and send it to everyone by next week, or the end of this—certainly by Monday or Tuesday.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Great, okay.

**Phil Renner – Kaiser Permanente – Principal Consultant, Metrics Development**

I actually had a question about the charge. Are we taking the measures as given, or are we evaluating the measures as well within our purview? Because I think that changes our charge a little bit.

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

Maybe I can try this one. Yes, I do not think that we want to spend a lot of time evaluating the measures per se, but try to think more about—for the types of measures that are either there now or that we're trying to get to, as outlined there, what do we need in terms of clarity, vocabulary sets, models, etc.?

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Right. I'm guessing since we probably aren't going to do them all, that we may evaluate them in the sense that we say this one is more clear. We can imagine the data source as being accessible. So we

might recommend addressing some of the ones first rather than second, but taking all of them as the given set that we need to prepare for use.

**Phil Renner – Kaiser Permanente – Principal Consultant, Metrics Development**

So the question is, are the code sets in other infrastructure likely to be able to support the implementation. So, in that case, we may be able to sidestep defining what a high-value process or measure is.

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

Yes, I think the reason we wanted to keep that high-value care process nomenclature there is so that as we're looking at things, like in particular the QDM, etc., as we look at models we don't want to lose sight of the fact that we're not going to just want clinical processes or clinical outcomes but also cost, patient-reported. So it's just to make sure we don't limit our view of these models.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Right and I think the other part of that for me would be that I think we want the quality data model to be useable for the next set of measures that we don't even have in view right now. So, in that sense, it's a definition of what we want it to be able to support, going forward.

**Phil Renner – Kaiser Permanente – Principal Consultant, Metrics Development**

Okay, thanks. That helps clarify it a lot for me.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Another other thoughts, suggestions, comments?

I have one question—maybe David, you're the person who would know this the best. In terms of the longitudinal measures, I don't remember the measures in detail from the Policy Committee. You could imagine longitudinal quality measures that would measure the continuity of care as opposed to something like blood pressure that measures the progress of a given parameter over time. For example, if someone has an abnormal colonoscopy and needs a follow up in five years versus three years versus ten years, one longitudinal measure would be: Do they get the follow up? The other would be: Are you controlling blood pressure? Do longitudinal measures include both of those constructs?

**David Lansky – Pacific Business Group on Health – President & CEO**

Well, ... comment, Jim. I think conceptually yes, but practically—it's turned out that we often want to look at claims data to capture some of the re-admissions and longitudinal transactional information. Of course, within our program of meaningful use, we don't have systematic opportunity to reference that data. So within the structure of this program, my impression is more likely that we'll look at the clinical outcome progression data as you described it, but .... Then also from the patient experience survey, I think there's an opportunity to get patients to talk about transitions in care and care coordination, communication among providers. But Tom, do you have another take on that?

**Tom Tsang – ONC – Medical Director**

No, I think you're right. But Jim, I think it was just really semantics of we're trying to capture the broader class of measures that would take advantage of the longitudinal care record. You can actually break it down into one bucket would be the blood pressures, and the progression over time, whether Hb1c's ... progression over time, and the second bucket would be looking at probably the clinical outcomes such as the colonoscopy screening and the care coordination that would be effected by the longitudinal nature. So we're trying to actually capture both.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

It came up in the Gretzky call this week. I have a question, quickly—and if this is not relevant that's fine. If a patient outcome is at a certain level, if you have 85% of your patients with hypertension and controlled, then the change over time, the delta, becomes vanishingly small. So the delta's really only useful if you're doing badly at something, at least at baseline. Do we have any conception of kind of a switch, where if you got to 75% or something—some performance level—on one of these, that the

measure would change from being a delta measure to being an absolute measure? Or to say it differently, if you only have 17% ... 30% or 50% of your blood pressure patients controlled, is the delta relevant or is it really absolute and you're just not doing very well?

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

Jim, just to offer one thought is, I guess, when I think about longitudinal measures I'm interested in how things are going over time. If they stay the same, that might be good and that's okay, I don't necessarily compartmentalize that I'm only interested in those who are not at goal because somebody at goal one week could not be at goal six months from now.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Yes, but it seems to me an absolute measure would capture that and so you aren't in six months, you wouldn't get reimbursed.

**Phil Renner – Kaiser Permanente – Principal Consultant, Metrics Development**

Is that an issue or a question that's proposed in the measure specifications from the developers? If not, maybe that's a question we need to kick back to them as part of our work.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Floyd, is that—?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

You're asking about delta measures, improvements?

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Yes.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

So with respect to the QDM, the QDM would define a specific data element that can occur at any time and the logic within the measure can indicate when—so a measure developer can indicate in their logic that they're looking for a specific result, for instance, at a certain time, and another result at whatever time they choose. Let's say an example is greater than or equal to six months after the first one. So they could describe that using logic. The measure developers would need to determine what an appropriate time is and how to define the index or initial finding that you're looking for improvement. So that can be done. I don't have one right now. There's a grouping of three measures for depression screening, PHQ-9. The first measure looks for it occurring, the second measure looks for if it's greater than nine, what was the value within six months and then another measure saying within twelve months. So those are designed as three different measures, but you could define them as one.

Does that help to answer or does that add confusion?

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

No, that helps. The one thing a delta measure can measure that an absolute measure would not is how promptly someone who's newly diagnosed was adequately—achieved an appropriate outcome.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Yes, to give another example that I've heard people give is instead of just looking for an absolute—the blood pressure on a hypertensive is less than 140 systolic and less than 90 diastolic—to look at the initial diastolic and systolic and to see what was the decrease or what was the change. That's where evidence would need to determine what's an acceptable increase to say that's better care where both the first systolic and the second systolic could each be over 140, but still in the measure provide credit because it came down from 190 to 143, as an example, or 142.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Clinically, I mean another way to approach this would be to say that part of our problem is that it just takes us too long to get people controlled, but the measure would be what percentage of patients

had their blood pressure under 140/90 within 6 months of—or whatever time—of diagnosis. Which is a different—that's a fundamentally different clinical reality, and I think that's the one we're after. That it doesn't take three years to get everybody below 140/90, but just a simple delta isn't going to get at that. It won't answer the other problem that if I go from horrible to not quite so horrible but it's 100% improvement, what does that mean exactly.

**Tom Tsang – ONC – Medical Director**

Jim, I think you're spot on, but I could also think of instances where you have the longitudinal nature or measurement of patient self-reported outcomes, specifically functional measures, over a period of time. So, for example after knee surgery and you're looking at rehab intervention and other interventions, and you're measuring the progress over a patient's functional status, and that's going to take a certain amount of time. Whereas, I guess the absolute measures that we have are really just single snapshots—

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Well, but that's what I'm thinking about, Tom. I mean what David wants is to know what percentage of patient's we get back to work within "X" number of days after "X" procedure, not are they improving.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

I wanted to just make a suggestion, and I agree. I want to know the same thing David does. What I'm interested in is the scope of this group—we could go back and forth on as far as what is the most appropriate measure based on evidence in order to provide that example. Or we could come up with a relatively acceptable example that is a straw man, so that we could then address are the standards there to be able to represent that? Because if it can and we keep that as the scope, we can then allow the measure developers to go back to the evidence to say what is the most appropriate value and the time to look for that? It's a matter of what scope you want to have in this committee.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Well yes, and I guess that's my question. Is that a question that's relevant to us?

**David Lansky – Pacific Business Group on Health – President & CEO**

I think our scope doesn't go there myself. We've got now about three other layers of jurisdiction so that the Quality Measures Workgroup, which has been going up through the Meaningful Use Workgroup, and then to the HIT Policy Committee, which then the coordinator may or may not support. Then that goes to CMS ultimately for inclusion in the rule. So there's a lot of those technical and policy checks on what the right measures are. I think, unfortunately, we are not be handed for our task now, the slate of stage two measures because that's still in development. So we're a little bit in this ambiguous state of trying to take probable measures or as Karen said, desirable measures, and see if we can lay out the standards framework to support them, realizing that they may or may not make it through the sieve of policy and technical judgments that ....

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Alright, that's fine. So Judy or Tom, let's record that we made that decision then. That we considered that and decided that was out of our scope.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Okay.

**Phil Renner – Kaiser Permanente – Principal Consultant, Metrics Development**

I actually really—I want to second Floyd's suggestion. I think it came up earlier that if we had some straw men or example measures that we'd be able to sort of hold up against the standards rather than trying to do it in a vacuum would be really helpful for those of us who are kind of concrete and literal.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Right.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

The only challenge with doing that is when—if we look at a measure concept, we can look at what we think will be in a measure, but when it actually gets specified we could end up missing some key data element that we won't have looked at. But I don't think there's any other way around it, in the meantime.

**Phil Renner – Kaiser Permanente – Principal Consultant, Metrics Development**

Yes, and I think that just becomes sort of a caveat or a risk in our outputs.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Alright, I think we're probably at the time that if we don't have—other comments are welcome, but if we don't have any others, we'll try to incorporate this discussion into an updated version of the work plan and go on to Floyd's introduction to the quality data model. Any other thoughts, comments? Okay. Floyd?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Okay, thank you very much. What you received in your e-mail for this presentation is more than we may have time for to discuss. So what I'm going to do is allow you to use that as general reference and go through some of the highlights here, so I can present what really this quality data model is about.

So if we can move to the next slide. Oh, okay—I have the slide presentation up and I was watching the wrong screen. So what we'll try to—do you have the slide presentation up, Judy?

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Katelyn, you have Dr. Eisenberg's slide presentation, could you put that up on the screen?

**M**

I'll see if I can—

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Because what I'll try to do here is describe the quality data model as a method for expressing information within quality measures as standard manner; try to show the value of how it can express data for quality measurement, decisions support, other purposes. Certainly, also, how it may be able to provide what is necessary for these straw men but actual real measures as they're developed. I think what we might want to look at as we're looking at the QDM model is to see would any of this also be important to an implementation guide for EHR's and other clinical systems, not only for managing quality measures but any data that may need repurposing for other purposes. Also, think about where, even though the model may address something, where there may be some standards that need to be enhanced in order to make this more useable, and use.

Nothing's being shared yet. What I can do until that shows is have you—I'll tell you what slide I'm on. So if we go to basically slide six, historically, as many of you know, the quality measures have been, in many cases, abstracted or using claims data or claim submission of data, and somewhat more fragmented. Now with—we see there's some abstraction going on, but we're starting to see some more collaboration between quality and IT. So, let me start the background on slide seven.

QDM was first initiated when the AHIC (American Health Information Community) asked for a set of data that can be used across quality measures. The first HIT Expert Panel (HITEP) was funded by AHRQ for NQF to review their first 82 high priority measures and a Pareto analysis of the types of data was performed, as well as the value of each type of data element. That was helpful, but what was important was to try to expand this to not only the current measures at the time, all of them, but also thinking of future measurement what other kinds of information would be needed and that's where the second HITEP call came in. That group came up with more of a model of information that looked at a concept and how it was used, and assigning specific value sets to each of those contexts to be able to describe the measures. What NQF experienced last year was actually applying that model to 113 measures for the retooling process. So that's the history.

Let me move to basically slide 11, because this is the real meat of what is the QDM. A QDM element is basically a specific concept. The example provided in this slide is a medication and in what state or

context do I want to know about that? So in this case, it's administered. So I want to know, this medication has been administered, but I want to know what medication. In order to do that, I can set the instance of the concept. So the medication that I'm looking for is aspirin. How do I know it's aspirin? It's identified by a taxonomy. In this case, RxNorm is used. For those who don't know, no these are not correct RxNorm codes; these are example. This is just for the slide, but the idea was to show—I want to know that aspirin was administered. I also may need to know additional information about it. So I might want to know it was administered within 24 hours of the occurrence of an MI or of admission. If that's the case, then I can indicate it happened before something or after something. Some concepts, for instance, if I want to know an admission, have an admission and a discharge, if I know a hospitalization. I also might want to know arrival and departure. So the timing is a way we would describe how that could be applied specifically to this one measure.

In some cases, we need to know who actually provided it. So if we were looking at things like a measure for patient engagement, to know that in this case—this is a little far-fetched to say aspirin implies patient engagement. But if we wanted to know that it actually was given by the patient, by the nurse, by a physician, to know which actor, to know if this is something that is moving from place to place, from where did it come—what was the sender, what was the receiver? Then there are specific things about medications we may need to know, we call concept specific. In some cases, I need to know the route, is it oral, is it IV. I might need to know the dose, I might need to know the duration for how long is it to continue. So we have a number of what we call attributes around it, but the main piece of this is the concept—in this case medication—and the state administered.

If you go to the next slide, there are a couple other examples and here's where taxonomies come in as well. The first example here—this is slide 12—is aspirin as you saw before, but there are times where in the retooling we realize some organizations, probably most, are using ICD-9 and we provided the ICD-9 for the active condition diabetes, using the same model. We provided the I-9 but we also, for those moving to ICD-10, the measure developers were able to provide to us the ICD-10 values. For those who are using ... those as well. What we sometimes would have a code list or a value set comprised of additional or other value sets, and in the retooling process, we called those groupings. They're basically a value set that contains other value sets and in some cases that was more for describing the same concept. In some cases that can be done for convenience. In this case, there on the right hand side of slide 12, I have a medication that's dispensed and I want to know ace inhibitors and ARBs (angiotensin receptor blockers). So each one of them has a value set or code list, but I can combine them to say in the measure to just indicate one by having the two value sets.

So this was how we applied the taxonomies within the QDM. The QDM itself is really the picture of this rectangle that is a concept, its state or context of use, and the related value sets. Plus, it can also identify specific attributes. So if you'd like I can stop there before going into more detail and wait for some questions, or do you want me to continue?

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Thanks, Floyd. So are there any questions at this point?

**Joachim Roski – Engelberg Center for Health Care Reform – Research Director**

Floyd, I think I understand how this is a standard way of expressing any quality measure. I couldn't quite tell from your introduction, are you saying that EHR vendors basically have this type of logic embedded in their IT construction model? Or are we now suggesting that they should move in this direction?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

In doing this evaluation, we did not—I don't want to suggest that EHR's currently have this structure in their systems. We had to first look—the whole process was to look at, as a measure developer thinks about data that are needed to perform the measure, then if they could think in a structured way of what concept, how do I want to make sure it's used in an electronic record, what values would represent it. That was the original intent of working through the QDM. In order to try to address what EHR's either have, or at least in some respects should have, is we subsequently had each one of these combinations of concept and state—so med administered as one example—we had that mapped to a HL-7 reference

information model leaning heavily on the clinical document architecture structure. So there is a mini-template of how to describe med administered, which then can contain a value set of aspirin or condition active that you could put in a value set of whatever condition you're looking for. The reason we did that is because based on certification that CCD, at least as one of the potential requirements for certification, was leaning in that same direction. So it would be something that EHR's at least are focusing on, rather than starting from scratch. Does that help?

**Gene Nelson – Dartmouth – Prof., Community & Family Medicine & TDI**

Floyd, as we looked at slide 11 and then to the right hand side it's aspirin—if the right hand side were a patient reported outcome such as PHQ-9 score, for a patient with depression, how would this QDM work?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Okay, so the concept for the PHQ-9 score would be a functional assessment, which is one of the concepts we have listed in the QDM. I didn't get to the list of all the concepts yet. We would want to know the results, so the state of that would be, or the context would be, I want a functional status assessment, which has a result and the code list, actually we did retool those measures, are the LOINC code for the PHQ-9, so it says I want this particular assessment and the timing indicated when. So we actually did use the QDM to do that. I will have the full list of all the concepts to you, but if you go to slide 13, you'll see some of the concepts that we used. We do have functional status as one of them, so we included that as a functional status assessment, which we included as a PHQ-9. Does that help?

**Gene Nelson – Dartmouth – Prof., Community & Family Medicine & TDI**

Yes it does. Then, let's see, going back to that same example, would the actor be the patient?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Yes, so that could be. That is a decision for those creating the measure and the intent of output you're looking for. So if you wanted to know it came directly from the patient and they filled it in, yes, the actor would be the patient. If it's okay that a nurse fills it in, the actual—I'll take you to slide 17, except we're changing the words a little bit. We want to know who were the actors, we want to know, who was the informant, or what's the source of the information. Who recorded it and what's the focus, or who's the subject? So you could say the informant is the patient, the focus is the patient, the recorder—if that's what you want, you could indicate it's the patient or you can say it's a clinician taking the information from. So that depends what you want to put in your measure. The challenge there as Joachim might indicate, is how do we keep all of that information with this result in an electronic record, so we can find it that way, but at least we were trying in the QDM to give a way to express what you want to say, to get to what you're looking for.

**Gene Nelson – Dartmouth – Prof., Community & Family Medicine & TDI**

That's very helpful, thank you.

**Tom Tsang – ONC – Medical Director**

Floyd, you have in the state declined. How do you account for the differences between some of the measure ... in terms of exclusions versus exceptions?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Okay, so we put in here decline. In the measures we retooled, that concept is listed as something is not done. We're modifying that a little because we think it's a better way to describe, to call it something is declined instead of the—it works the way it was done, and authoring tool will do that. But your question is really related to, when do I apply the exclusion—and Karen I'll give a little bit of a description and see if you agree with this. If after state looking for folks in the denominator, I then want to remove anyone with certain characteristics, the HQMF or eMeasure format will call that an exclusion. So I look for everyone in the population, I now narrow the search down to only those in the population that fit denominator criteria, and now the exclusions are removed from the denominator.

Now, I look to see if the numerator interventions have occurred. For those exceptions, I look for all those in the population denominator. I look to see if the interventions in the numerator occurred, and if they

have not occurred, then I remove those patients who were not compliant with the numerator from the denominator so that I'm only measuring—because those are reasons why the intervention shouldn't have occurred, but they're removed later. Did I state that correctly, Karen?

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

Very good, Floyd.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

I know it's a little complicated to get the difference. In the retooling, most of the time we took the—or all of the time—we took the exclusions directly in the denominator, not calling them an exclusion category we just called them “and not” so if something says “and” it has to be there. If it says “and not” that means you exclude those. So that's where you'll find the exclusions in the retooled measures. The exceptions are actually listed in the exclusion section. Not to confuse, but that's what happened.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Floyd, so you're saying that the exceptions are people who are in the denominator—or who are in the numerator, who have not excluded by some prior data but do not receive the intervention.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Right, so I'm going to make up a case here because it's clearer if you use this kind of a case, but it's not exactly a real example. If for some reason you wanted to allow a patient to refuse a hemoglobin A1c—the measures don't do that, but let's assume they did—you would first look for all patients of greater than or equal to 18 and less than 75, population. Your denominator would say all patients with an active diagnosis of diabetes, you could say, or all patients who are on medications that are used for diabetes.

Now I have my denominator, but now I want to exclude those who are on medications for diabetes only because they have polycystic ovarian disease—and I'm forgetting the other reasons, but that's good enough for the example—unless they have polycystic ovarian disease but really do have diabetes. So the exclusion would be patients with polycystic ovarian disease. They come out before you look to see if they had an A1c. Then the numerator says, was the A1c less than 8, and the answer is I have 80% of my patients meet that—that's perfectly fine—20% don't. So of those who are less than eight, I can look for an exception to say it's not less than eight because I don't have one because I refused it, or some other reason. I mean, that's just taking you through an example of—they didn't meet numerator criteria so was there a real reason why they shouldn't have. Does that help a little bit?

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

But you're not saying that exceptions are only patient related factors, are you?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

No, no. There might be other factors. Actually I talked to measure developers that have different philosophies on that. My understanding of the philosophies are one, if you have a reason why someone should not have an intervention, go ahead and don't even look for the intervention if they have that reason, that's an exclusion. Others would say even though there's a reason, the doctor has enough information about that patient that it's not an absolute contraindication, it's relative, and the doctor wants to do it, talks to the patient, the patient agrees, they get the intervention. So making an exception provides performance credit for doing that right thing of not just applying all relative contraindications as absolutes.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Oh, so are you saying then that an exclusion is a relatively absolute contraindication, whereas an exception is a relative contraindication?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Well you could say that. It depends on how they're applied by each measure developer but—

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Okay, well I have the we're at 3:31 Eastern. Judy, does that mean we need to go to public comment?

**Judy Sparrow – Office of the National Coordinator – Executive Director**

If you want to just take a few more minutes of workgroup discussion, that's fine. Otherwise, we can go to public comment.

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

Maybe I can just add to kind of close out this discussion for now. I guess, Floyd, just to confirm I think maybe where Tom was going. So, in the QDM, you have a place where you're guiding measure developers and others who use the model to indicate their exclusions and their exceptions, right?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Right.

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

So you feel you have those distinctly covered?

**Tom Tsang – ONC – Medical Director**

Yes, Karen, I just want to make sure that whether there's a placeholder or not, it's something that we need to capture in the EHR.

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

No, I get it. So that's why I was just trying to—rather than spending a lot more time about the nuances of it—

**Tom Tsang – ONC – Medical Director**

Yes, right.

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

—do you have this.

**Tom Tsang – ONC – Medical Director**

Exactly.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

In either one of them, you have to capture that element within the EHR. It's how you apply it within the measure. Absolutely.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Okay, thank you Floyd. Are there any other questions about this—sort of Floyd's presentation?

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

I think what we're asking folks to do then, offline before we meet again, is to look at what Floyd's provided, and including his QDM component matrix, and think about whether there are other things. Knowing where we want to go, and the types of measures we're considering going forward, is there anything that should be added to this or reviewed. Then also going forward is this the kind of model that we're going to need to keep very robust going forward, is something else needed, that type of thing.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

The only thing is I should add, this was an overview. We actually have the QDM next draft coming out for public comment on the 18<sup>th</sup>, the day of our next call with this group. We hope to have at least a week before the full QDM version for you to see. These are just some slides of examples of components of it. So we'll be able to get you the draft version for you to review prior to the 18<sup>th</sup>.

**Gene Nelson – Dartmouth – Prof., Community & Family Medicine & TDI**

As I think about what might be in a high-value care model, one thing I'm wondering about is the presence of harm, iatrogenesis, due to medical care and reflected in the patient's health outcome. Is harm embedded in one of these concepts?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Harm isn't specifically listed. That would be an interesting discussion and I think it would be good to hear from the group if looking at all the concepts in applying logic, if you could create a measure looking for harm based on any of those concepts that exist. I think somewhat yes, but I'm not sure everything. I do think, somewhat, yes.

**Gene Nelson – Dartmouth – Prof., Community & Family Medicine & TDI**

... this looks really good, but harm, I was wondering about harm. I was thinking about the PFI indicators of the new proposed ACL measure and the need for safety as expressed by an absence of harm.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

We also have a new component, called health record component, and states of action around that to actually let you measure use of EHR components or describe measures of those. So, I'll leave it to the chairs but that might be a very good straw man measure to test against this, if you're looking for one.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

That's a good idea Floyd.

**Rosemary Kennedy – Thomas Jefferson University**

Floyd, just a quick question. The system could be a sender and a receiver and also a recorder? I'm sorry I can't remember, could you just speak to that? It ... itself.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Yes, the idea of the flow of information to say that the informant could be an application or system, the recorder, and it could be recording about itself, yes.

**Rosemary Kennedy – Thomas Jefferson University**

And it could also be the sender—obviously, the sender and the receiver as well.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

That's true. That was the intent is that we're not always talking about human actors. It could be system actors. Correct.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Floyd, does recorder imply that there is no interpretation or would there be a different role if it were an interpreter? For instance, a clinician taking a history and making an interpretation of it.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

The definition here is the actual recorder of it. If there's an interpretation, the way we have applied this, we would look for something from the clinician that indicates the interpretation as a different element rather than including interpretation in it. This was trying to think of if any EHR could provide this type of metadata then this is the actual data sitting in the EHR, so the interpretation would be—we would see as defined as a different element than the original result, for instance.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

I'm not sure that this is an issue but certainly it's the case that when a physician takes a history or does a physical examination, interpretation is built into that. The questions that are asked, the approach, what's recorded, and how it's recorded—it would be very different than more a stenographic recording of something, which also occurs often enough.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Oh, so I understand what you mean. The reason for indicating the actual recorder was to address the fact that—recorded not by the patient does sometimes—often will, imply some interpretation by the recorder. So that was actually the reason for listing recorder. So if it's the system that the recorder, then it is more stenographic. But if it is the clinician that's the recorder, there's implied interpretation that goes with that.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

So is that knowledge in someone's head, or is there any need to make that knowledge represented in the data model?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Well the data model would define it. So we have to look at our definition for each of those. So anything recorded will contain potentially the bias or interpretation by the individual recording, but that's something we're open to comment on.

**Rosemary Kennedy – Thomas Jefferson University**

So, recording would be stored in the database. So if the EHR had a discharge order and a referral was made for case management or home care, that referral then would go to a case management or home care system, be recorded in that system, and would wait for interpretation by a professional, in terms of whether it's a valid referral.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Right, maybe this is irrelevant. What I'm trying to get at is at some health care workers—it's their job to, or they inevitably interpret as they record others, or intended to interpret as little as possible and then just transmit data.

**Rosemary Kennedy – Thomas Jefferson University**

Yes, and system to system maybe there's no interpretation necessary. It's a referral that goes from one system to the other. Then it's acted upon but it's not really interpreted.

**Joachim Roski – Engelberg Center for Health Care Reform – Research Director**

Can I ask a more, sort of overarching conceptual question, and that is the way we're thinking about data from EHR for quality measurement is a secondary use, right? So one issue that I'd be interested in hearing you comment on, Floyd, is so if all of this detail were to be recorded by clinicians or somebody in the electronic medical record, is that more burden than what they would otherwise be engaged in to provide care for that patient, or has that been tested in that regard? I mean, I do understand the kind of detail you want for measurement purposes, but I guess I'm asking how does that impact care provision?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

That's actually a terrific question. The answer is this is defining the kinds of data required. I think in some cases, it's an implementation issue as to how much obtrusiveness there is or extra workflow to do it, or can it be done without extra workflow. I understand that needs to be evaluated to get down to this level of detail. So I understand it's an issue. In order to describe the level of detail needed in the measures that we looked at, especially the abstraction ones, we really did have to get down to this level. So some of the things like who recorded it, when, and the timing issues should be automatically reflected in the EHR database. Whether that persists with the data element is a different issue, but it should be collected. Some elements, for instance, justification for doing a procedure or not doing a procedure does require something to be entered, unless there's automatic justification because if this diagnosis is present, the procedure's always done. The path we took was just to try to do that.

**Joachim Roski – Engelberg Center for Health Care Reform – Research Director**

Yes, I think I understand that. I guess, sort of implied as I'm thinking about my question now is—my sense is that, if that information was to be recorded and to be accessible for quality management purposes, it would have to be in searchable structured field. I wonder to what extent—today anyway, most physicians record this in text fields in their EHR's and may or may not find it intrusive to record it in different ways.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Our experience is if it is designed well, physicians and other clinicians find it more efficient to the extent that the quality measures are meaningful, that's certainly our effort, and then to the extent that HIT is well designed. It can be more efficient, partly because some of the metadata's automatically recorded Floyd ... because you can do lots of things to make the data recording easier.

**Aneel Advani – Indian Health Service – Associate Director Informatics**

Floyd, thanks very much for presenting this. I had a ... some questions. So first, are you positioning the quality data model as a standard in itself? If you are or aren't, to sort of outline where you see that going. Then related to that, a second question, it seems that this is sort of an incipient development that you've had a chance to present to folks and the future use of the quality data model in your authoring tool, as well as the integration of this model as part of the tooling process, is sort of still to be carried out. I'm wondering if you could sort of comment on the relationship between converging on the standard and that process for the next year. Then thirdly, which is a separate question from the first two, in addition to the EHR, sort of perspective, have you looked at the quality data model in relation to repositories for recording in quality data to CMS and the data models for those?

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

There are a couple of questions there, so I'll take the last one first because I remember it easiest. We have not directly looked at data repositories, but we have had significant interest from registry organizations that manage for specialties, especially, to be able to capture data directly into the registry and maintain it, using this model format. So that's that answer.

With respect to standards, this was developed originally at the request of the AHIC as part of a quality use case in 2006 when HITSP made the request for if you want us to look for data we need to know what data you're looking for. It has been developed in a consensus process—that's what HITEP is or it was is a broad-based stakeholder group that was called by NQF that reviewed, and there were two different groups, one for HITEP one, one for two. Each of those then went out for public comment and the QDM has gone out for an additional total of comment in September. It will do that again this month. So this has been a consensus process to develop. The further intent is, we were hoping for the May HL-7 meeting but it will likely occur in September—it won't occur in May—that we will incorporate in a health quality measure format implementation guide, the QDM, and all of the patterns or templates that were used to do the retooling. So this becomes a draft standard for trial use in HL-7 as well. Did I get all of your questions?

**Aneel Advani – Indian Health Service – Associate Director Informatics**

Yes. I'm not sure if you answered the second—so that's very helpful. Thank you so much. The other question was sort of around the integration of the QDM with your tooling efforts and sort of integrating it into the usual NQF processes. If you could sort of comment on that, from the perspective of validating the model—the operational validation.

**Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant**

Sure. That's a great comment. In any software, we need some kind of model of information in order to code the software, so the QDM was used as the model for information. The vendor that's creating the software with us, IFMC, also assisted with some of the retooling so they understood exactly what was necessary to make this work and to provide that user interface workflow. It's now in data testing with seven different types of organizations—a few measure developers, a few hospitals, health plans—in order to make sure that one, the tool is useable, and two, it's telling us how useable the QDM is. So hopefully that will provide additional input.

As far as testing it, I think that the acid test we had was applying it 113 measures that we retooled with the ... last year, and that's really where we identified it's not just the data model. But how do I represent the relationship of element A to element B when one has to occur before two within three months, and two has to occur within one year of number three. So in order to create all that logic and indicate the additional information necessary is where we identified this need.

**Karen Kmetik – AMA – Director Clinical Performance Evaluation**

Jim, I need to sign off. Thank you.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Floyd, thank you very much. Judy I think we should go to the public now and resume Floyd's presentation next time.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

That's right, we have part two. Operator, can you see if anybody from the public wishes to make comment?

**Operator**

We do have a comment from Carol Bickford

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Okay, thank you Carol, go ahead.

**Carol Bickford – ANA – Senior Policy Fellow**

Carol Bickford, American's Nurse's Association. Will the work plan and timeline that was addressed at the beginning of the conference be available as part of the documentation from the call?

**Judy Sparrow – Office of the National Coordinator – Executive Director**

I believe it's up on the—should be up on the Website. If not, Carol, I'll send that to you right now.

**Carol Bickford – ANA – Senior Policy Fellow**

Okay. I didn't see it. I pulled down all the documents ... the last one the presentation was coming to. You don't need to send it to me, I can pull off the Website when it's posted.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Anybody else from the public?

**Operator**

We do not have any other comments at this time.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

Thank you Jim. Thank you everybody.

**Jim Walker – Geisinger Health Systems – Chief Health Information Officer**

Thank you. I apologize for going late. We'll try to keep this thing on time from now on, but we'll see you April 18<sup>th</sup> for the next meeting.

**Judy Sparrow – Office of the National Coordinator – Executive Director**

That's right. Thank you.