

NATIONAL QUALITY FORUM
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eMEASURE LEARNING COLLABORATIVE
IN-PERSON MEETING:
ADVANCING SOLUTIONS FOR eMEASURE
IMPLEMENTATION

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FRIDAY
SEPTEMBER 21, 2012

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The meeting convened at the National Quality Forum, 9th Floor Conference Room, 1030 15th Street, N.W., Washington, D.C., at 8:00 a.m., Rosemary Kennedy, Moderator, presiding.

PRESENT:

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KENNETH GOLDBLUM, MD, FACP, Renaissance Health Network
SHARON HIBAY, RN, DNP, Quality Insights of Pennsylvania
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RUTE MARTINS, The Joint Commission
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1 P-R-O-C-E-E-D-I-N-G-S

2 (8:12 a.m.)

3 DR. KENNEDY: Good morning
4 everyone. We are going to get started.

5 I am Rosemary Kennedy, Vice
6 President of Health Information Technology at
7 the National Quality Forum and I just want to
8 invite you to our second eMeasure Learning
9 Collaborative face-to-face meeting. And the
10 first meeting was conducted in April. We had
11 over 100 attendees with approximately 50
12 participating over the internet. Today is the
13 same. We have close to 100 registrants in
14 person and we have approximately between 50
15 and 60 participants over the internet
16 listening in.

17 So for those of you, how many
18 participated in the April face-to-face
19 meeting?

20 (Show of hands.)

21 DR. KENNEDY: Quite a few. So
22 some of you are familiar with the eMeasure

1 Learning Collaborative. And for those of you
2 who are not, the eMeasure Learning
3 Collaborative is an open public forum to bring
4 together stakeholders from the quality
5 measurement enterprise. That includes
6 stakeholders in the field of measure
7 development. It includes vendors, clinicians,
8 all of those that are involved in care
9 delivery in the specialty of quality
10 measurement. So it is really a vast large
11 group that we are bringing together through
12 funding from HHS and these meetings are open
13 to the public. And it is all the stakeholders
14 in the public that are really very critical if
15 we are going to be successful in the field of
16 electronic measurement.

17 The goal of the eMeasure Learning
18 Collaborative is to share learning and
19 knowledge and also to share best practices
20 related to electronic measurement using data
21 coming from health IT systems that are
22 captured as a natural byproduct of care

1 delivery.

2 The eMeasure Learning
3 Collaborative is also focused on identifying
4 gaps and making recommendations. And it is
5 through the input of all the key stakeholders
6 that will really be able to move this platform
7 forward.

8 As I said, this is a second face-
9 to-face meeting for the eMeasure Learning
10 Collaborative. We will also be doing sharing
11 of knowledge, best practices, gaps and
12 recommendations electronically and creating
13 communities of practice, if you will, to
14 continue the dialogue, to continue the
15 exchange of information. And we will talk a
16 little bit about that more later today.

17 During this eMeasure Learning
18 Collaborative, we will be focusing on three
19 major areas of discussion. The first area is
20 condition/problem management, looking at
21 opportunities, challenges, best practices
22 relating to capturing information related to

1 condition and problem management. And that
2 will be a panel. We are going to conduct this
3 by setting up panels that will share some use
4 case examples, share some I like to call them
5 best practices, maybe wherever you are right
6 now they are more like repeatable models. And
7 then as a byproduct, we will discuss
8 recommendations, identify gaps. We welcome
9 your participation. It is through your input
10 and knowledge that we will be able to really
11 move this forward.

12 The second area will focus on
13 medication management and the third area will
14 focus on data visibility, those essential
15 elusive data elements that are in the record
16 that may be a little hard to get out.

17 So through three panels, best
18 practices examples will be shared and then we
19 will open it for discussion, also including
20 the public participation on the internet.

21 There are basically around three,
22 four questions that we are going to ask today.

1 What are the best practice examples related to
2 the development and implementation of
3 eMeasures? And based on our experiences to
4 date with MU2, this should generate a lot of
5 interactive dialogue from all stakeholders.

6 The second question will focus on
7 mechanisms to enhance data and workflow
8 capability. It is not just getting the data
9 for electronic measurement but it has
10 significant impacts at the point of care on
11 workflow. So we will spend some time talking
12 about that.

13 And then we will discuss some
14 recommendations for future use of health IT
15 and standards to enable the eMeasurement space
16 and spend a little bit of time discussing how
17 we can maybe rethink what we are doing to do
18 it in a smarter fashion and do it more
19 efficiently.

20 So there are some of the questions
21 that we will ask and discuss today.

22 I would like to take this time to

1 thank the planning committee. We had a call
2 to the public for members of the planning
3 committee. We have approximately 22
4 individuals. Those of you who are on the
5 planning committee, would you please stand up?

6 (Applause.)

7 DR. KENNEDY: They met biweekly
8 and I must say we put them to work. And I
9 think it will reflect because the members of
10 the planning committee really represent all of
11 the stakeholders in the market, spanning the
12 whole entire continuum.

13 And with that, I would like to
14 introduce the chair of our planning committee.
15 he has done a significant amount of work for
16 us and we really do appreciate that. And Dr.
17 Zahid Butt is the eMeasure Learning
18 Collaborative planning chair. He is President
19 and Chief Executive Officer with Medisolv. He
20 has more than 25 years of experience in a
21 variety of healthcare settings. His current
22 efforts are focused on building software

1 applications that leverage hospital datasets
2 for quality improvement and business
3 intelligence. He served many leadership roles
4 both in medicine, policy, quality, and health
5 information technology.

6 He is actively involved in CMS'
7 expert Technical Expert Panel for Meaningful
8 Use Clinical Quality Measures. And Dr. Butt
9 currently chairs the HIMSS National Quality
10 Forum Task Force.

11 And we can't say enough about Dr.
12 Butt with all the efforts related to MU2 and
13 the timelines, he really steps up the plate
14 and contributed significantly to the content
15 for today's curriculum. So with that, I would
16 like to call Dr. Butt to the podium.

17 DR. BUTT: Thank you, Rosemary.
18 Good morning. I welcome you all to a
19 beautiful day in the nation's capital and it
20 is wonderful to see so many familiar faces
21 here that we have had the pleasure of meeting
22 from time to time here at the NQF.

1 And my job this morning is to try
2 to summarize some of the themes and concepts
3 that came out of the first in-person meeting
4 on April 26th. So the meeting was held as
5 Rosemary mentioned here at the -- how do I
6 advance this thing? Thank you.

7 Okay. So the meeting, as Rosemary
8 mentioned, was held here in person and we had
9 organized the meeting into five different
10 discussion groups or tracks, if you will. One
11 was acute care, the other was small practices,
12 and individual ambulatory care practices.
13 There was a technical group data analytics
14 group and an innovation track. And the format
15 was that these folks, after the two keynote
16 speakers went into separate sessions and tried
17 to discuss the areas that they were assigned.
18 It did present a little bit of a technical
19 challenge in terms of getting the online
20 people involved in five different sessions,
21 however, each session had a couple of
22 moderators and the NQF staff assigned scribes

1 who were able to capture all of the
2 information and also record the dialogue. So
3 I have learned that everything gets recorded
4 at the NQF, I guess. Almost everything gets
5 recorded.

6 But what we have tried to do is to
7 -- the NQF staff have then gone back and they
8 have tried to summarize some of the sort of
9 discussion that took place. So what we have
10 done is put together some slides to just kind
11 of walk you through the flavor of the
12 discussion that took place. We haven't
13 necessarily edited stuff out but just
14 summarize it so even if something doesn't look
15 relevant it is because we just wanted to
16 capture. And as you know, when you get very
17 smart people in a room, tangential discussions
18 are often the result. But be that as it may,
19 we have tried to summarize and hopefully give
20 you a little flavor that sort of sets the
21 stage for what we are going to do today.

22 But before I do that, the two

1 keynotes included Dr. Kate Goodrich. She is
2 at the CMS Office of Clinical Standards and
3 Quality. She gave us an overview of all of
4 the different quality measure activities that
5 take place over there. It was a very, very
6 good overview that everybody appreciated.

7 And then Dr. Mostashari, who needs
8 no introduction gave a rather inspiring speech
9 and the four takeaway points from that speech
10 were that we should use the marketplace for
11 solutions. It is kind of refreshing to see
12 that from a government person.

13 Keep our eyes on the prize which
14 is really HIT as a means to an end, which is
15 really improving quality of care for our
16 patients, which we need to always keep at the
17 center. And watch out for, as we discussed,
18 these big solutions. We should always be
19 looking out for the people who are out there
20 struggling to take care of patients on a daily
21 basis and we should never leave sight of those
22 people.

1 So with that same spirit, we sort
2 of tried to organize the various discussions
3 into these three key areas, the focusing being
4 really on implementation, since the eMeasures
5 Learning Collaborative primarily is about how
6 do we implement eMeasures and how do we
7 increase the uptake of eMeasures out in the
8 field and, secondarily, give the feedback to
9 people so that it is sort of a continuous
10 improvement loop.

11 So these three areas were sort of
12 felt to be very important as far as
13 implementation is concerned. Organizational
14 factors/leadership was felt to be an important
15 domain out there. We also spent a lot of time
16 on data capture and clinical workflow and
17 certainly the goal is also to have a learning
18 health system.

19 So the key success factors within
20 organizational and leadership areas is
21 probably somewhat intuitive and not a big
22 surprise to anyone. It was felt that these

1 efforts really for them to be very successful
2 should be collaborative multi-stakeholder.
3 There should be strong physician leadership
4 but not only that, the bedside clinicians, be
5 they physicians or other clinicians, need to
6 be engaged early and often.

7 The culture obviously always gets
8 in the way of these things and you may have
9 heard that famous line that culture will eat
10 strategy for lunch any day. And so clearly
11 changing the culture is important in
12 institutions. It was also felt that
13 sufficient time and resources to education is
14 important, which is often not thought of in
15 that fashion.

16 And then the clinical staff and IT
17 people need to work together towards a common
18 goal and use success of the program to garner
19 support throughout the system especially by
20 using benchmarks.

21 So the key success factors of our
22 learning health system were felt to be an

1 emphasis on outcome measures to improve
2 clinical practice and not just simply measures
3 for the sake of measuring.

4 The logic of linking patient
5 conditions in EHR to evidence-based best
6 practice guidelines and clinical decision
7 support is felt to be an important success
8 factor as a part of learning.

9 There was a thought expressed that
10 sometimes measure specifications lag clinical
11 guideline advances and perhaps that is sort of
12 a key success factor that there needs to be
13 more rapid cycle incorporation into the
14 guidelines.

15 Clinician education on the meaning
16 and methods before the actual measurement was
17 felt to be very important because a lot of
18 times the clinicians are told after a
19 measurement is already in place that this is
20 what we are going to measure as opposed to
21 sort of getting them involved up-front and
22 explain to them why a measurement is going to

1 be done and why it is important.

2 The last one is important because
3 it is also felt that the learning health
4 system needs to be more transparent and also
5 not sort of punitive. It should be the foster
6 improvement and people should be free and
7 should share the experiences without any fear
8 of retribution.

9 So in these two areas there were
10 some recommendations, organizational
11 leadership, perhaps the NQF, which is by
12 nature a multi-stakeholder type of platform
13 should, perhaps define the type of
14 stakeholders that are needed in these
15 organizations to come together, emphasize as
16 Dr. Mostashari said, keep our eye on the prize
17 and make sure that we identify the goals.

18 And it was also felt that
19 sometimes small practices get overwhelmed with
20 these measures and then perhaps a smaller set
21 of measures could be given to smaller
22 practices so that they can try to learn from

1 that and improve their ability to report.

2 The learning health system
3 environment needs to again be a
4 multidisciplinary type of effort which should
5 engage all the key stakeholders that Rosemary
6 has already mentioned. And it was also felt
7 that perhaps a learning health system should
8 focus on one specific area, instead of just
9 sort of going broadly with a whole grab bag of
10 measures but to take one area and do it really
11 well so that you can show end-to-end
12 improvement from the point of clinical care to
13 all the way outcomes measurement. And so that
14 sort of resonates more with the care delivery
15 providers and they can sort of connect to how
16 measurement relates back to what they do on a
17 day-to-day basis.

18 Integrating the EHR into
19 population management and case management were
20 some of the recommendations. HIEs are
21 beginning to form and it was felt that they
22 need to maybe pick one measure and perhaps

1 look at cost if they are not as rich in
2 quality data and somehow try to cut their
3 teeth on measurement at the HIE level.

4 And then the last one is sort of
5 intriguing that a true learning system really
6 should be a system where it is a self-learning
7 system that the system really needs to be sort
8 of a futuristic idea that as the system is
9 measuring itself, from what I am told in
10 industrial engineering and manufacturing, some
11 of this type of activity already takes place
12 that the system by analyzing the data actually
13 tells them. That is sort of the true business
14 intelligence, if you will. So that is kind of
15 the true north that someone thought was
16 important to keep in front of us.

17 There was a lot of discussion, as
18 you might imagine on data capture and
19 workflow. I mean these two words have become
20 very common now as we all sort of get into the
21 actual implementation of eMeasures. Because
22 really that is kind of where the data

1 originates. And so the key success factors in
2 this obviously were that we should have smart
3 clinical data capture sharable with clinical
4 decision support and measurement so you
5 capture once and use it many times. So that
6 is sort of the holy grail that you all sort of
7 thought important.

8 Reduce the burden of data capture
9 for quality only. So in other words, doctors
10 should not be made abstractors, if you will,
11 by just adding more screens for them to fill
12 out information. So that is a key point that
13 is important.

14 There needs to be a balance
15 between liquidity and expressivity. Whether
16 something is granular, does it really matter
17 in the context measurement that we need the
18 last little nugget of information at the
19 lowest level? So that was another point.

20 It was felt that there were too
21 many prescriptive requirements as to exactly
22 where the EHR data must be captured and

1 stored. And this is kind of a tough one
2 because the next one says that you should have
3 more flexibility in configuration. So it is
4 kind of a difficult thing because on the one
5 hand you want to standardize things, which
6 some imply that it should be more
7 prescriptive. On the other hand, people want
8 more flexibility on how they can capture data
9 and how you sort of marry those two together
10 where the data capture is manageable and
11 flexible, yet it is able to be standardized
12 for the core elements that are to be captured.

13 The gaps, there were several gaps
14 identified. These include cultural and
15 technical issues with capturing structure
16 data. So structural data capture is always a
17 difficult thing.

18 EHRs use a model of use while the
19 measures require a model of meaning. So there
20 is a little bit of a disconnect there.
21 Usability it was felt not formally addressed
22 by vendors and then there is the inability to

1 use unstructured data in an efficient way for
2 eMeasure reporting and there are multiple
3 unresolved issues with the problem list,
4 especially on the inpatient side. And we
5 don't have all the data in EHR or fully
6 understand the systems from which data are
7 derived.

8 So a lot of these comments are
9 sort of gaps identified by providers because
10 by nature sometimes they don't know the data
11 in their EHR where it is coming from, et
12 cetera.

13 A few more gaps identified and I
14 think that the top three are probably related
15 that pairs probably use a lot of claims data
16 for quality reporting and somebody felt that
17 they didn't pay for specialty guidelines or
18 hat is why the clinical data collection is not
19 that great.

20 There is a provider-to-coder
21 disconnect because the coders, especially on
22 the inpatient side, do code the encounter, the

1 discharge, and sometimes there is not a sort
2 of smooth relationship between the provider
3 and coder in a more proactive way. There are
4 some sort of the coders sort of creating
5 physicians and then they have to respond back,
6 et cetera but it was felt that that needs to
7 be -- that that is a gap that needs to be
8 addressed.

9 HL7 was felt to be somewhat of a
10 slow-moving thing which has long cycles and is
11 difficult to modify. I'm not sure how that
12 gap will be filled but it is there and someone
13 mentioned it and how to get everyone to agree
14 on how to set standards is to read the final
15 rule.

16 So but I think that is really one
17 of the key accomplishments of Meaningful Use
18 is really to force those standards that I
19 think you may have heard that famous saying
20 that standards are like a toothbrush.
21 Everyone recognizes they need one but no one
22 wants to use somebody else's.

1 (Laughter.)

2 DR. BUTT: So the recommendations
3 as far as data capture and workflow were
4 concerned, the first is obvious, train
5 physicians on how to use the EMR and patient-
6 centered input of data. And perhaps there
7 should be some low-hanging fruit that is
8 simple to collect, simple to report,
9 leveraging existing data that is being
10 collected as part of Meaningful Use. Perhaps
11 you should really aim for the low-hanging
12 fruit first.

13 Select measures with
14 specifications matching data elements captured
15 according to Meaningful Use so that is kind of
16 in that same category. Develop a culture and
17 technical solutions for capturing more
18 structured data within clinical workflow. And
19 perhaps even have some framework of measuring
20 userability. I mean this was also one of the
21 things that came out, that there is no
22 framework to really see who is capable of

1 doing what and sort of have some kind of a
2 mechanism to perhaps those that are having
3 difficulty with certain data to help them with
4 that. Perhaps there are some of those methods
5 that people have developed in their
6 institutions. It would be an interesting
7 point to sort of see if there are people who
8 have tried to do those type of things as part
9 of their implementation.

10 Explore new technologies such as
11 natural language processing and there is
12 really a lot of promise, a lot of excitement
13 about this. You know we have got vast
14 quantities of unstructured data and perhaps we
15 will continue to have vast quantities of
16 unstructured data. And is there a
17 technological solution to try to convert that
18 into some sort of structured thing? I am sure
19 that during today's presentation we will hear
20 some of that.

21 So one of the other things that
22 came through is that there needs to be some

1 mechanisms to incorporate the external data
2 sources, especially in medication management
3 because that is important. Providers often
4 respond much better to appropriately designed
5 CDS, clinical decision support, and so if you
6 can leverage data for both clinical decision
7 support and measurement that perhaps that
8 would be sort of a winning formula with
9 physicians and clinicians.

10 And the last one is sort of again
11 one of those frontier type things. What about
12 patient-reported data? How do we sort of
13 incorporate that into measurement?

14 I guess the number one as I said
15 before vendors are already sort of complying
16 with some of the standardization that is part
17 of Meaningful Use. There was a sense that the
18 quality data model should be used to resolve
19 ambiguity with respect to logic and meaning.
20 And there should be harmonization of measure
21 specification value sets and output for
22 reporting.

1 It was also felt that in our
2 desire to try to sort of move all of this into
3 sort of codification that perhaps we shouldn't
4 lose site of the fact that the English
5 language still matters to many people and that
6 here should be always some explanation of what
7 is being sort of done in a geeky sort of way
8 that is understandable by regular users so
9 that they can connect with what is being done
10 on the back end.

11 Usability testing, field testing,
12 and even registry reporting which currently is
13 somewhat limited in the sense that it collects
14 a very narrow set of data variables was felt
15 to be something that could be leveraged to
16 extend their capability.

17 And I believe this should be the
18 final slide. There was, again, this is just
19 to give you a flavor of what was being said
20 and it was that the entire HL7 RIM is perhaps
21 too big but there should be some kind of a
22 basic schema that needs to come out of it.

1 And then vendors should try to
2 maybe have a dedicated area for quality
3 measurement and they should move towards a
4 single source of truth type of framework
5 because multiple data sources have that
6 problem at the data collection level, where
7 there seems to be no single source of truth
8 obvious to some people. Devices have a lot of
9 data that could move into the EHR for
10 reporting.

11 And finally, someone did point out
12 that yes, it is important to sort of get down
13 to a very basic level in terms of what is
14 possible to report but we shouldn't lose sight
15 of the fact that there is possibly some
16 advanced measures and future that could
17 leverage data that might be considered
18 unusable today in sort of a very locked down
19 structural fashion.

20 And I think with that I would like
21 to just point out that all this material is on
22 the NQF website and I have put in the link up

1 there because you have both PDFs and the MP3
2 recordings if you want to listen in any of
3 those conversations.

4 So I think that wraps up the sort
5 of summary of the April 26th meeting and I
6 turn it back over to Rosemary. Thank you.

7 (Applause.)

8 DR. KENNEDY: I don't know about
9 the rest of you but it is somewhat
10 overwhelming if you look at it but in
11 reflecting on the April 26th meeting and what
12 Dr. Butt just reviewed, our focus has been
13 really on trying to find that right balance
14 between the data granularity that is needed to
15 describe the measure and to get that
16 represented and integrated in the electronic
17 health record in a way that we can capture
18 data and do electronic quality reporting. But
19 finding that balance between getting the data
20 granularity and not necessarily increasing the
21 burden on the mission at the point of care.

22 So although that has been the

1 focus, if you kind of think about it, I was
2 just reflecting listening to him speak, if you
3 think about Meaningful Use and everything that
4 is going on, it really is addressing those
5 other two areas as well; organizational
6 culture, because we are trying to change
7 culture, change how people think, and the
8 second area a learning health system. We are
9 kind of in that rapid cycle, very rapid cycle
10 plan-do-study-act all at the same time. So I
11 think we are trying to address all of those.

12 And the panel today present case
13 studies and we have the discussion certainly
14 you will hear which we are just asking you to
15 be patients with a lot of these things coming
16 up. Leadership, culture, changing, creating
17 a learning system, and then also this data
18 infrastructure. And it is somewhat
19 challenging but it is important to look at all
20 three of those domains.

21 So the first panel is going to
22 focus on condition/problem management. The

1 moderator for that panel is Ginny Meadows.
2 She is a registered nurse and Executive
3 Director of the Program Office at McKesson.

4 So I would like to ask the first
5 panel members to come up. And Ginny, if you
6 can please introduce the panel members. We
7 will have them share their use cases, their
8 studies, their perspectives and then we will
9 open it up for Q and A and interactive
10 dialogue.

11 We really encourage interactive
12 dialogue of Q and A because you folks are
13 really generating the recommendations that we
14 will embrace moving forward. So it is very
15 important to engage and I am sure everyone
16 will.

17 MS. MEADOWS: Is this on? Yes, it
18 is. Thank you, Rosemary, very much for that
19 nice introduction.

20 So just to introduce this, you
21 heard as Dr. Butt talked about some of the
22 things that we learned in our last

1 collaborative meeting, one of the issues -- it
2 is not on?

3 Is that better? Yes. All right.
4 Sorry.

5 So what I was saying is as Dr.
6 Butt pointed out in our first collaborative
7 meeting, one of the things that we identified
8 as being a significant challenge, and really
9 a lot of it was introduced with Meaningful Use
10 Stage 1 in both the key objective of being
11 able to define a problem list but then in the
12 quality measurement and how those conditions
13 and problem management really drive a lot of
14 the quality measures.

15 So condition and problem
16 management really came into focus as being
17 something we really wanted to explore more
18 deeply in this learning collaborative.

19 And I will introduce my panel
20 speakers. You met earlier Dr. Butt and he
21 will talk about how in an ambulatory setting,
22 how they have actually identified some best

1 practices to manage that problem list. And
2 also some of the key challenges that they have
3 identified there.

4 And then Peggy Pollard who will
5 speak first is a registered nurse. She is the
6 Director of Clinical Informatics at
7 CentraHealth and Peggy is responsible actually
8 for leading all of Centra's clinical system
9 implementation and they successfully attested
10 to Meaningful Use in 2011 so they were one of
11 the early attesters. So they have been on
12 this journey now for a couple of years so they
13 have a lot of experience to talk about as far
14 as how they have handled the management of
15 their condition and problem management in the
16 acute care setting.

17 So we have a couple of objectives
18 for this panel. As we go through the
19 different case studies, you will hear them
20 both talk about some of these. So first of
21 all is really defining condition and problem
22 management and its importance to eMeasures and

1 why it is really necessary to make sure that
2 you have got a really good accurate,
3 consistent identification of those problems.

4 It is a foundational objective for
5 Meaningful Use Stage 1, as we all know, but it
6 also plays a key role in the denominator
7 selection for many -- well really almost all
8 of the quality measures. And it is also
9 important for looking at exclusions as you are
10 trying to calculate those measures. And it is
11 a key input to clinical decisions support.

12 So the management of the
13 conditions and problems that a patient has
14 really plays such a key factor in all of this
15 technology.

16 And so as we go through the panel
17 presentations, each one of the panelists will
18 identify some of the best practices that they
19 have used in their organizations to really
20 drive this and talk about some of the
21 recommendations they might have that could
22 actually be carried on and best practices for

1 other organizations to use.

2 Then we will also talk about some
3 of the key challenges and what the gap areas
4 really are that we really need to focus some
5 more attention to and start thinking about
6 what is the best way to handle some of those
7 things and what potentially other
8 opportunities are there for some additional
9 work in this area?

10 So as I said, the panel discussion
11 will include the clinical case studies and
12 innovative solutions to really address the
13 condition/problem management and the acute and
14 ambulatory setting. Once we finish the case
15 studies, then we are going to open it up to
16 more of a group discussion. So this is where
17 we are really going to ask for your input and
18 have some actually open discussion on some of
19 the things that were identified by both Peggy
20 and Dr. Butt but then also some other things
21 that you may also have some experience with
22 and ideas that we want to expose and explore

1 a little bit more in this collaborative
2 setting.

3 We will have about a little bit
4 less than an hour and a half to do this
5 discussion and I would like to remind all of
6 our attendees that are on the phone that we
7 will also be able to entertain questions
8 through the chat box from the webinar or
9 other, I don't know if they have an
10 interactive phone -- is there a phone? So it
11 will be the chat box. So we will welcome
12 their questions through that chat box.

13 Okay, so Dr. Butt is going to
14 present first because his slides are first.

15 DR. BUTT: Okay thank you, Ginny.
16 I was hoping for a little breather but that is
17 okay.

18 Anyway so in my spare time I wear
19 another hat, which is to go and see some
20 patients a couple of times a week. And this
21 is the practice that I have been affiliated
22 with for a long time. We are located in

1 suburban Baltimore/Howard County and this is
2 sort of the obligatory slide of who you are
3 sort of thing.

4 We were established, the practice
5 was established in 1988; 15 certified
6 gastroenterologists. We have one PA, two
7 nurse practitioners, two endoscopy centers.
8 We have privileges in two different hospitals,
9 acute care hospitals. We do actually have a
10 small clinical research group that has three
11 full-time research associates. We do some
12 clinical studies mostly as sub-investigators
13 where it has to do with inflammatory bowel
14 disease or polyp surveillance, et cetera. We
15 also have on-staff three anesthesiologists,
16 four nurse anesthetists and one part-time
17 pathologist.

18 These are some of the statistics.
19 We are a general community-based consulting
20 practice. We had, as of 2011, 19,503 unique
21 patients, which is sort of a new lexicon we
22 have adopted since Meaningful Use. Around

1 5,000 inpatient consults, 22,000 ambulatory
2 visits, 2100 hospital procedures. And the age
3 range of our providers is from 35 to 66. I
4 think the guy who is 66 is probably older. He
5 just says that he is 66.

6 (Laughter.)

7 DR. BUTT: He certainly looks a
8 little older.

9 So this is our HIT journey
10 basically. I am going to focus on our sort of
11 HIT journey with a focus, with an emphasis on
12 problem list/condition because I think that is
13 a very important part of it. Obviously, this
14 panel is focused on that.

15 So we had a practice management
16 system in 1990 and one provider, which is
17 myself, was using an ambulatory EMR since
18 1996. And just to digress for a moment, back
19 then I was on-staff at a hospital and I was
20 Director of Clinical Information Systems. And
21 I got called in by the CEO one day and he said
22 we are going to buy all these primary care

1 practices. For those of you who have been
2 around that long you might remember there was
3 a phase of this hospitals buying practices
4 back in the mid-'90s. We are now in a sort of
5 back to the future again.

6 But anyway, he said we are going
7 to buy all these primary practices and we want
8 to use an EMR as one of the big selling
9 points. So you have two months to go out and
10 find an EMR and start piloting it. So I went
11 out and did my due diligence and found an EMR
12 and started piloting it.

13 And so they bought some practices.
14 It sort of didn't go so well for other reasons
15 but the long and short of it is I continued
16 the pilot from '96 until 2011. So it was sort
17 of the time in wilderness for 15 years. I was
18 just an island in the practice and no one sort
19 of wanted to touch me. They didn't want to
20 come close to me.

21 And I tried many times to sort of
22 see if there would be an interest amongst my

1 other providers to sort of expand this thing
2 to the entire practice but I had no takers at
3 all.

4 It wasn't until I showed them this
5 slide in 2011 and I said okay, how would you
6 like to get \$44,000 each and, by the way, if
7 you wait until 2014, it will be down to
8 \$24,000. This is what we were able to
9 accomplish in six months.

10 (Laughter.)

11 DR. BUTT: So say what you may
12 about capitalism. One thing you can't say is
13 that it doesn't work.

14 So we were able to upgrade our EMR
15 system to a full certified EHR system. We had
16 to upgrade hardware, et cetera, et cetera.
17 You know they were willing to make the
18 commitment for both money as well as their
19 attention.

20 We were able to do major workflow
21 changes, structure data entry, forms-based
22 data entry, CPOE, ePrescribing, interfaces

1 with two of the largest commercial labs,
2 radiology, and to our ambulatory software
3 system, we have an ADT interface to that. All
4 external documents are now scanned in and
5 eight of the fifteen are actually currently
6 ready to attest for Meaningful Use Stage 1.

7 The one provider that out of these
8 eight that had the most difficulty was the one
9 who had been using the system the longest,
10 which was myself, because I realized how
11 efficient we can get with bad practices and
12 how difficult it is to relearn good practices,
13 which I think are good practices doing this.

14 So I am just going to take a few
15 minutes to just show you the sort of the pre
16 and the post and it might be important to make
17 the distinction. In the pre I actually was
18 doing my own problem list. I was capturing it
19 in ICD-9 while I was interviewing the patient.
20 I was capturing medication lists but they were
21 not codified. In other words, there was no
22 RxNorm attached to them. And I was

1 selectively entering some of the lab results
2 in the flow sheet sort of just to keep track
3 of a few things for certain select patients,
4 obviously.

5 Much of what I was doing was
6 totally unstructured text templates and I had
7 all sorts of ways of quick text and this and
8 that to get very efficient at generating a
9 note. And then the demographics were just a
10 minimal data set. There was no interface with
11 our practice management system.

12 So here is where we are today. We
13 are obviously entering medications in the
14 medication list that is not only structured
15 but codified problem lists, lab data
16 structure. Very few data elements are
17 unstructured and full demographic interface.
18 The big difference is in the workflow. So we
19 have initially the provider was just entering
20 all of the data whether structured or
21 unstructured and the notes were then printed
22 and put in the chart. And for everything

1 basically it was just paper chart and pools
2 and all the orders were handwritten.

3 So here is the workflow we have
4 now and that is sort of the major change that
5 we have now our new role in the practice of
6 medical assistant who are capturing the
7 problem list, medication list, allergy list,
8 the past medical history.

9 Now the reason I bring this up is
10 that this almost, this capture of the problem
11 list the way I was doing it, almost derailed
12 this entire project even the \$44,000 was not
13 enough to convince my partners to do it
14 themselves. They just said forget it. I am
15 not doing it. So we really had to go to this
16 model to try to sort of get the problem list
17 and the medication list and the allergy list
18 structure data entered through medical
19 assistant.

20 Now I know we have talked about
21 the best practices. I am not suggesting that
22 this is the best practice but this is a

1 practice to get this thing going. And I think
2 I am sure that there is more than one way to
3 practice this stuff or capture this data but
4 I think the goal is to whatever method one
5 chooses to have some sort of a best practice
6 so that there is accuracy in that data and
7 that is sort of the point I want to make with
8 this one.

9 So here are some of the challenges
10 that we had with the problem list
11 documentation. And I am using sort of problem
12 list sort of interchangeably with condition
13 management or diagnosis. But if you think
14 about it, a problem list is more expansive in
15 general. It has sometimes more things than
16 just condition and diagnosis. So that was one
17 of the questions you have to ask first. What
18 is going to be in your problem list? Is it
19 going to be just the conditions and diagnosis
20 or is it going to be more expansive? And
21 there is no right or wrong answer, I don't
22 believe there is, because all of these things

1 are important if you are trying to sort of put
2 them on a list.

3 So for example, should we be
4 putting presumptive or suspected diagnosis?
5 We have a feature within the product that says
6 you can say question of and even select some
7 problem. Procedures are important. So the
8 practice decided to have a more expansive
9 problem list, since we are a specialty
10 practice. The question was should we put all
11 conditions on the problem list that the
12 patient has or just the ones that we track and
13 follow. And the practice again decided to put
14 all the conditions that a patient has on the
15 problem list.

16 This is, the past medical history
17 is sort of an example of where the old and the
18 new world sort of collide because in the past
19 we would say okay so this patient has past
20 medical history of hypertension, diabetes,
21 this, this, this, and this and everybody
22 understood what that meant. But in this

1 world, when you are codifying it, ICD-9 often
2 has a different code for history of. So for
3 instance, a polyp can be coded as a diagnosis
4 or as a history of a polyp, which has these
5 so-called V-Codes attached to it. And I will
6 show you later on the implications of this, of
7 how you sort of navigate this part but
8 physicians have to almost really rethink the
9 way they used to think past medical history.

10 And so anyway, I have a few screen
11 shots just to kind of get you a flavor of what
12 I am talking about. So here is our sort of
13 desktop and it has the problems on the left
14 side, the medication on the right side. And
15 so one way to enter the problem is to just go
16 in and select from a problem list. It is
17 relatively easy because you just type in a few
18 words and it picks up a coded list and you can
19 select. But this is the one that most of the
20 doctors didn't want to do it. They didn't
21 want to have to sit there and enter 15
22 problems of a patient by doing this

1 repeatedly.

2 So the question became that a
3 medical assistant, how do they select these if
4 we are going to give them. I mean yes, we can
5 train them a little bit but they are not going
6 to have the knowledge in general to be able to
7 select the right code and so forth.

8 So the solution is this. This may
9 be a practice, as I said, maybe not the best
10 practice but it is a workable solution. So we
11 have now a new patient. They always used to
12 fill out forms before but now the form is
13 basically codified in a sense that we have
14 under the past medical history, which is
15 really going to be the part of the conditions
16 and problems, we have created common sort of
17 words and there is an EMR version of that and
18 this common term is now in the back end coded
19 to an ICD code.

20 So the patient selects this. In
21 that sense, the medical assistant is really
22 almost a data entry person so there is less

1 chance for error and ambiguity. At least we
2 are capturing the codes that we have defined
3 and locked down. And then the physician
4 certainly can review and change it, if they
5 want to later on.

6 So the problem or condition then
7 sort of becomes important. And this is where
8 I was again going to circle back and so we had
9 all these history, the past medical history
10 was all these V-Codes. So they were going in
11 as a V-Code in the problem list. But then
12 under the assessment section, the physician
13 was selecting that code to put in their
14 assessment but then it was pulling up the V-
15 Code. And they were saying well wait a
16 minute. I am treating this current problem
17 and the code is telling me it is a previous
18 problem.

19 So now we have split that form
20 that I showed you earlier that truly the ones
21 that are previous problems are V-codes and so
22 there is a lot of this iterative sort of thing

1 which we had to discover on our own. So the
2 recommendation is really could we have some
3 sort of an implementation guideline that sort
4 of goes through some of these types of very
5 detailed -- now whether that is a vendor issue
6 or whether that is an NQF or a multi-
7 stakeholder but there needs to be some kind of
8 guidance and there is really not a lot of
9 standard or guidance as to what needs to get
10 into these things and how do they effect the
11 workflow.

12 And it is even more important here
13 because as you see on the right side, we have
14 the problem, this diagnoses. These are the
15 same diagnoses that have been entered and then
16 we select those to attach to our encounter
17 billing. So the physician will then select
18 the encounter code. And generally many of the
19 insurance companies will question if you put
20 a V-code as a billing diagnosis whether that
21 is worthy of payment.

22 So when you are tying your problem

1 list condition to your assessment, to your
2 billing diagnosis, you really need to be very
3 careful how you design this thing so that the
4 alternative would have been for the physician
5 to have to go into the problem list, change
6 it, then come back. So it is death by a
7 thousand click type of workflow.

8 So then this is my final slide.
9 So you go through all the pain and then you
10 can run your report. So NQF 61: blood
11 pressure management in diabetics. And I have
12 purposely blotted out the user names. This is
13 actual data. And we have performance rate of
14 zero percent to 75 percent in the same
15 practice. The problem is, none of us take
16 care of the blood pressure of these patients.
17 So that is part of the problem that you know,
18 eMeasures will generate data but we have to be
19 very careful in attribution of that result to
20 a physician who is doing the actual care and
21 responsible.

22 So I know CMS is working really

1 hard on this attribution issue in question and
2 they have some methodologies that they are
3 developing but to me, as we get more and more
4 of this eMeasure type data that is going to be
5 sucked in directly from the system,
6 attribution is going to become extremely
7 critical.

8 Now from our standpoint, we are
9 going to report this because this is one of
10 the measures that we have to report to get
11 paid. But thank God they are not looking at
12 the numbers because somebody might think that
13 the zero percent guy is really terrible,
14 although it is just the luck of the draw that
15 his five cases, his referring doctors are not
16 doing a good job. The PCPs who were managing
17 that patient's hypertension are not doing a
18 good job but that shows up under his name.

19 So I don't know, I may have gone
20 over my time. Is it okay?

21 DR. KENNEDY: Yes.

22 DR. BUTT: So here are the gaps

1 that I was asked to come up with and I think
2 that there needs to be maybe not just one best
3 practice but two or three different best
4 practices that we should provide more
5 implementation guidance of the type that I was
6 describing because there is nothing out there.
7 I did some searches. AHIMA has some articles
8 they have published but those are very high
9 level, sort of general concepts but it doesn't
10 get into the nitty-gritty of provider workflow
11 and how you incorporate the condition
12 management into your problem list.

13 Harmonization of structure data
14 capture with standardized values has a QDM
15 attributes -- states and attributes. And this
16 is a very important one because for example,
17 I will give you one example. When we do a
18 problem there is a date of onset that we can
19 put in and then there is a date the problem
20 was resolved. Our system assumes that the
21 problem is active when there is no resolution
22 date but there is a date of onset. But the

1 QDM attribute actually makes a distinction
2 between inactive and resolution. So yes, if
3 it is resolved it becomes inactive but there
4 is a state before resolved that could
5 potentially occur, which is inactive. But
6 that needs to be an attribute that is
7 something that we can point to within the
8 problem list in the system.

9 And so these types of issues now
10 fortunately none of the specifications use
11 inactive problems. Most of the specifications
12 just use active so it doesn't matter because
13 that is synonymous with unresolved issues. So
14 these types of small nuances need to be
15 harmonized.

16 In the future obviously now with
17 Meaningful Use Stage 2 problem list is going
18 to be locked down with SNOMED. They have
19 already stated that ICD-9 is not accepted,
20 although sort of a translation can take place.
21 That raises the issue of the encounter
22 diagnosis because that needs to be an ICD.

1 So there needs to be some automated system
2 where a SNOMED code is selected on the problem
3 list and it translates automatically into the
4 encounter diagnosis. And then in the future
5 some framework for reconciliation of external
6 problem list.

7 So these are some general lessons
8 learned. You know, one of the ones is very
9 important even someone like myself who was
10 very into the eMeasure space, we actually
11 didn't sit down and select the CQMs that we
12 were going to end of reporting ahead of
13 implementation. We somehow thought we would
14 just figure it out towards the end. But that
15 is critical because if you miss two data
16 elements and so forth in your implementation,
17 some of your, you know, like the smoking
18 cessation stuff and so forth. So you need to
19 incorporate that up-front.

20 And then really if you want to do
21 this thing right you will have to redesign the
22 entire workflow of the office.

1 Okay, so and finally education and
2 staff turnover and so forth. So that is my
3 last slide. I apologize for going a little
4 over but I am very passionate about this
5 stuff, so please forgive me for that.

6 But I think I will stop here and
7 if there any -- I guess -- you are going to do
8 the Q and A together. Right?

9 DR. KENNEDY: We are not going to
10 do Q and A.

11 DR. BUTT: Oh, okay.

12 MS. MEADOWS: We have a little
13 change of plans.

14 DR. KENNEDY: We're going to
15 change the plans a little bit but you probably
16 won't know because you didn't know what the
17 original plans were.

18 (Laughter.)

19 MS. MEADOWS: We're fluid.

20 DR. KENNEDY: So we are very fluid
21 here and you, too, we have learned to be
22 really fluid over the last few months. But we

1 have a very special guest who we wanted to do
2 a break to introduce Dr. Farzad Mostashari who
3 has been --

4 (Applause.)

5 DR. KENNEDY: -- very supportive
6 of the whole eMeasure Learning Collaborative.
7 He came and participated in the April 26th
8 face-to-face meeting, gave us a go-forward
9 pass with some recommendations and charters
10 and we have not accomplished them all but we
11 are still in the process of getting there in
12 terms of doing some things with the quality
13 data model and quality measures. So we do
14 appreciate you being here and your support.

15 DR. MOSTASHARI: Thank you so
16 much. I am really glad to be here and to be
17 able to support this effort.

18 Patrick Conway, the head of the
19 CMS Office of Clinical Standards and Quality
20 as well as Carolyn Clancy and I last Friday
21 did a webinar where we talked about the future
22 of quality of measurement. I don't know if

1 any of you had an opportunity to dial into
2 that. I believe the presentation is available
3 and I think we should probably write that up
4 into something that others can read.

5 But we started off talking about
6 what the vision is for quality measurement for
7 the future. And to me, the most significant
8 shift comes when quality measurement moves
9 from being retrospective accounting to being
10 real-time improvement and all of the pains of
11 getting there somehow become worth it.

12 I was visiting a small community
13 hospital whose is on an electronic health
14 record and I said what has Meaningful Use of
15 electronic health records, how has that
16 changed what you do? And they said before, a
17 patient would be discharged. We would pull a
18 sample of the charts. We would start flipping
19 through and we would find these care gaps.
20 And it almost like we couldn't believe it.
21 Right? Like surely we gave the person the
22 prophylaxis or surely we gave them the

1 pneumonia shot, or surely we did this. How
2 could we have missed it? Look harder. Look
3 harder. Surely we have missed it. Flip
4 through the charts. Flip back. Scrub it
5 harder. And at the end of the day we didn't
6 do it as often as we thought we did.

7 And they said now, they almost
8 said it as if they are cheating, like now and
9 they weren't sure if they should tell me or
10 not. Now when the patient is still in the
11 hospital, we look at how they are doing on the
12 care protocols. And look at this. Look at
13 this. Look at this. I can order it. I'm
14 like that's not cheating. That's good. That
15 is what we want. That is the difference. And
16 maybe you can have perfectly good quality
17 measurement for the purposes of payment or
18 accountability but you can't do this with
19 paper.

20 Now, we also recognize that making
21 this shift to real-time means that things have
22 got to change. Right? And this is what we

1 have learned. We have learned. Fortunately,
2 many of us have been working at this for more
3 than just the past two years. So there is a
4 lot to build on. Carolyn presented some of
5 the research that AHRQ has done going way back
6 on what are the challenges that we have
7 learned about. And let me just run through a
8 few of them and not the progress we have made
9 on each.

10 The first is you can't expect
11 these electronic health records to capture
12 everything, every measure. And so there is a
13 need to focus. Right? There is a need for
14 focus and to prioritize. And yet while there
15 are over a thousand -- Helen? Seven hundred
16 measures to choose from, if we look at key
17 things that we want to accomplish, there are
18 some surprising gaps. So having the framework
19 that says let's start with what we are trying
20 to accomplish and work backwards and then not
21 just have a purely bottom-up approach but also
22 a little bit of top down what are we trying to

1 accomplish and work backwards from that and
2 identify what the priorities are. This has
3 been really hard to do. Right, folks? It has
4 been really hard to say this is a higher
5 priority than that. Well both of them have
6 constituents who have brought forth measures.
7 Right? But the National Quality Strategy did
8 that. It said six priority areas, preventable
9 causes of death beginning with cardiovascular
10 disease, the Million Hearts Program, patient
11 safety readmissions and hospital-acquired
12 conditions, patient family engagement, care
13 coordination. And then you look at each of
14 those and you say for care coordination, do we
15 really have great measures, broad-based
16 parsimonious, even process measures? When a
17 referral is made, did you close the loop?

18 And so there began a process of
19 measure acceleration. Some of the work that
20 CMS funded through us, with us, partnering
21 with AMA and PCPI and others to get measures
22 developed de novo. Any of you involved in

1 those activities? Thank you. Right? So
2 closing the referral loop and having it tests
3 pretty well. Right, Kevin? We are getting
4 better.

5 Medication safety we talked about.
6 Meds in the elderly accounts for 3.3 percent
7 of all elderly ED visits to emergency rooms.
8 Coumadin accounts for 30 percent, ten times as
9 much. We didn't have a measure for Coumadin
10 management safety, warfarin safety management.
11 Are you in the zone or not? And the team
12 found a measure from VA that hadn't gone
13 through the process and we accelerated that
14 and got that through for Meaningful Use.

15 So accelerating the quality
16 measures. But it is also how you develop and
17 maintain those quality measures so that the
18 value sets. If one code changes you can
19 separate that. And we have created with
20 National Library of Medicine the value set
21 repository working to standardize the
22 machinery, working with NQF on the measuring

1 authoring tool so that the process of quality
2 measure development can go from cottage
3 industry to a little bit more of a machine
4 line, assembly line. Standardizing the
5 outputs of that, standardizing our assumptions
6 about the inputs to that, working with the
7 vendors on certification that is much more
8 rigorous that separates out the tasks of
9 collecting, calculating consistently so that
10 in the future, not 20 years away, but two
11 years away from now, you can get to a point
12 where charters are almost like platforms that
13 can accept quality measures. They don't have
14 to be hard coated and hard tested to each and
15 every measure.

16 And yes, at the end of the day,
17 the data elements and hopefully a parsimonious
18 and smaller and slimmed-down set of quality
19 measures that does away with those considers
20 and does away with those exceptions and
21 exclusions that can't feasibly be collected on
22 every patient but those are actually collected

1 then as a routine part of delivering care.
2 And that is going to need a lot of that you
3 talked about, of starting with workflow,
4 workflow, workflow. Engaging the whole team
5 so it is not just the frontline clinician who
6 has to get all the data in place, making sure
7 that there is feedback.

8 If there is one magic bullet for
9 data quality assurance it is feedback,
10 feedback, feedback, so that they see the
11 elements that they are putting in actually
12 being used and reflected back to them. And
13 the good news is that we had made progress on
14 every one of those elements, pretty remarkable
15 progress I think in the past couple of years.
16 And we are going to continue to make progress
17 with your help.

18 And we have, really, a shared commitment
19 I think within the department and with you and
20 with important stakeholder groups with the
21 health plans, with the healthcare providers on
22 the need to get there. The road is hard and

1 long and the future is worth it.

2 Thank you.

3 (Applause.)

4 DR. KENNEDY: Thank you very much,
5 Farzad, for those insights and I think it sets
6 the stage, too, for some of the questions for
7 Dr. Butt in terms of what he presented related
8 to problems and integration of those in the
9 electronic health record.

10 So we will open the floor up for a
11 Q and A. I think we are changing it a little
12 bit. Maybe we just open the floor before
13 people forget what you presented.

14 So I do have a couple of questions
15 to more or less get things going. You said
16 that up-front you didn't really look at the
17 quality measures in terms of the problem list
18 and the condition list. And on the back end,
19 when you went back and looked at it, just two
20 questions. Was it a line? did you see a big
21 gap between what you normally captured in
22 terms of diagnoses for care delivery versus

1 what you needed for quality measurement,
2 number one?

3 And then number two, you talked
4 about data granularity and needing attributes
5 around the problems and the conditions and
6 what kind of opportunities and challenges did
7 you see there?

8 DR. BUTT: So I think that we do
9 capture most of the diagnoses accurately
10 because they are, as I said, first sort of
11 documented by the patient themselves or they
12 are pulled from a record that we received from
13 someone. The physician reviews them. So the
14 diagnoses are captured properly. The issues
15 was that if you have a diagnosis that is
16 active within our system, which lets say a
17 hypertension is an active diagnosis if there
18 is an onset but no resolution date, that it
19 gets into the measure and it is not
20 necessarily the measure that is reflective of
21 our practice.

22 So you know when we get into

1 performance-based measures, then I think it
2 will be important to know how we tie those
3 measures that we can be attribute to us. In
4 other words that reflect the care that we
5 delivered. So I know that later on we will
6 talk about possibly one of the gaps being the
7 specialty type of guidance but even within
8 primary care this issue of attribution is more
9 important.

10 In terms of the attributes, I
11 think that generally most of the attributes
12 are captured. There are these little subtle
13 nuances maybe I think this inactive one is a
14 big one because the QDM currently defines
15 inactive sort of as a separate state than
16 resolved. I mean resolved can be presumed to
17 be inactive but inactive can be before a
18 problem is resolved. So those types of small
19 things need to be resolved in terms of the
20 harmonization.

21 DR. KENNEDY: Any other questions?

22 DR. LARSEN: Yes, so I am Kevin

1 Larsen. The goal of the problem list is for
2 it to be a tool for you and your care team and
3 your patients to all be thinking together and
4 making an active plan of care. The goal isn't
5 for it to be a tool for building and the goal
6 isn't for it to be a measurement tool. We are
7 hoping to leverage it for those things.

8 So how do we help your partners
9 and your practice? What do you need from your
10 technologies, from the measures that helps the
11 problem list be a tool you guys want to use
12 and really provide value in your practice so
13 that we can then really rely that because it
14 is used and because people like it, it is
15 accurate, not that we force people to make it
16 accurate.

17 DR. BUTT: I think that is a very
18 good point and I think that the value in that
19 is really, in my opinion at least, two-fold.
20 One is, as you saw in that assessment plan.
21 So that is a new thing for our physicians to
22 get used to because before it was a narrative

1 consult. And sometimes we have partners who
2 would generate a five-page note and the
3 primary care would call back and say what are
4 you saying in this.

5 So I think we are truly now
6 getting into that problem-oriented medical
7 record and it is very refreshing because you
8 can actually select the problem and then you
9 can tie the orders and the medications to that
10 problem and you can define the state of that
11 problem. So it really is, even when the note
12 comes out, it is not very pretty because the
13 poles and that looks prettier, but the primary
14 care actually have called back and said yes,
15 it is not pretty but I actually get more out
16 of it because I know what your thinking is and
17 how you are tying your management to the
18 problems. The only issue that if it could be
19 improved and I don't know if it is an EHR
20 vendor issue or how, is that right now the
21 assessment is one problem at a time and
22 sometimes the assessment is combined. In

1 other words, you have diarrhea and abdominal
2 pain and we now have to sort of select them
3 separately and then repeat the same thing.
4 And it is not as clean-cut. So maybe some way
5 of combining problems in that assessment. So
6 for us, that is a very important piece. And
7 in the future I am hoping that the clinical
8 decision support tools that we might leverage
9 out of the problem list would be the other
10 carrot for us.

11 Does that sort of answer your
12 question?

13 DR. LARSEN: Thanks.

14 MS. SPIRO: Shelly Spiro from the
15 Pharmacy e-HIT Collaborative.

16 I want to applaud you for making
17 that change to the problem list because those
18 of us who are working in other types of
19 practice setting, especially pharmacists and
20 other healthcare providers, such as in the
21 medical home, really rely on the problem list.
22 And if we can't get that information from the

1 primary care physician, it is so important to
2 integrate that because as you said, with
3 medications or linking the problem list to
4 other areas is such an important piece.

5 Codifying it, I think to answer Dr. Larsen's
6 question, I think codifying it to your SNOMED
7 or your problem list to ICD-10 for your
8 workflow on billing will be the solution for
9 the future. I think that will sit behind the
10 scenes once our system vendors begin to use
11 that method. But I want to applaud you for
12 making that step, a really important step in
13 helping us alternative clinicians who are
14 working in other types of practice setting,
15 that information is extremely useful to meet
16 our quality measures.

17 DR. BUTT: Thank you. And I just
18 again I agree with what you are saying and
19 certainly what Kevin said that it looks like
20 the problem list is going to be much more of
21 a dynamic tool for a physician to take care of
22 the patients and that is where the dilemma is

1 in terms of when you have that sort of a
2 dynamic type of list, how do you try to
3 convert that into some kind of an encounter-
4 based diagnosis with ordinality and stuff like
5 that, which is really necessary for the
6 measurement? Much of the measurement keys off
7 of those lockdowns of that. And so that is
8 where that is connection is going to have to
9 be. And measurement usually because sometimes
10 people use SNOMED/ICD interchangeably but it
11 is not really in that sense that one is a
12 nomenclature and the other is a
13 classification. And often quality measurement
14 keys off of classification type of data and
15 more encounter-based data to define
16 denominators and so forth.

17 In the inpatient setting the
18 ordinality becomes an extremely important
19 principle, especially for outcomes measures.
20 Potentially for process measures, you could
21 potentially use -- like for example CHF. If
22 you are looking at process measures that say

1 if your patient had active CHF in the
2 hospital, does it really matter whether it was
3 number two or number one in process measures?
4 Did you do something for an active CHF
5 patient? Probably not. So in that sense it
6 is not as important. But if you are looking
7 at CHF mortality rate, it is probably
8 important that it be the principle diagnosis
9 if you are going to try to compare or you have
10 such good severity adjustment system if a
11 patient has principle diagnosis of something
12 totally different.

13 And so there is sort of debate
14 around that but I am saying there has got to
15 be some sort of resolution to that issue of
16 the problem list being somewhat of a more
17 dynamic list that is more expansive and used
18 mostly for clinical. How do you leverage that
19 to feed data into the quality measurement side
20 because they do have some of their constraints
21 in some of the measures that need that data.

22 MS. CLASS: I just had a question

1 if you had discussions around the example you
2 brought up as you discussed having patient-
3 centered measures and thinking about the
4 patient and valuable information and feedback
5 to the provider. So if you take your
6 hypertension measure you mentioned and for
7 your specialty providers to be held to
8 managing the blood pressure is probably not
9 their role. However, is their role to say
10 that they communicated to the patient about
11 they should talk to their primary care
12 provider about their blood pressure and there
13 is some concerns? And did you communicate to
14 the provider about that blood pressure measure
15 or that blood pressure and the concern about
16 it so that the role isn't necessarily for you
17 to fix it but the role is for you then to do
18 that handoff, that transition of care pieces.

19 Has there been discussion about
20 how though a measure may be the same measure
21 the role of a different provider may be a
22 different role piece in how you actually look

1 at the accountability pieces around those?

2 DR. BUTT: I knew Marge was going
3 to ask the tough question. She is from the
4 Tricare Military Health System. I think that
5 is an excellent point and really that is to
6 some extent embedded within meaningful use
7 like obesity and smoking. Not as much in
8 hypertension but I think your point is well-
9 taken that all of us need to be sort of -- all
10 of us need to feel like we are part of the
11 team trying to do the right thing and we may
12 have different roles for the condition. And
13 as specialists we shouldn't assume that
14 because it is hypertension it is somebody
15 else's business. Yes, we may not write the
16 script or change the medication but we should
17 at least inform the primary care physician
18 that this is what the blood pressure was and
19 yes, I think that is the stage we need to get
20 to. We are not there yet.

21 MS. MEADOWS: Okay, we can take
22 one more question.

1 DR. SOBKO: I'm Heather Sobko from
2 the University of Alabama at Birmingham. We
3 are struggling with the issue between
4 conditions and problems or diagnosis versus
5 symptoms. And what we are finding is that for
6 example just using hypertension it can be
7 controlled but it never really goes away if it
8 is associated with CHF or an endocrine problem
9 or is part of your chronic kidney disease. So
10 the active versus inactive list, just because
11 the problem is not having symptoms that are
12 exacerbated right now doesn't mean it is not
13 an active problem that is being actively
14 addressed and controlled and managed. So that
15 is just been a huge challenge for us and I was
16 wondering if may be you had some insight or
17 ideas that you could share.

18 DR. BUTT: I think that this
19 concept of inactive obviously is a difficult
20 one. And so the QDM does that have that as a
21 placeholder and it is very hard to
22 operationalize it, as you are pointing out,

1 especially on the inpatient side even harder.

2 So I don't know. I don't have a
3 very clear answer. I mean clearly when the
4 inactive is coterminous with resolved, there
5 is no problem. It is that it in-between state
6 that when do you term something inactive. And
7 I think Kevin probably has some insights into
8 it or Ted?

9 DR. PALEN: Well actually if a
10 person -- it could be that the hypertension is
11 controlled. I mean, they were diagnosed with
12 hypertension at one point and now they are on
13 meds to control it. They still have
14 hypertension. The only reason that it is not
15 elevated is it is controlled. And it is the
16 same as prostate cancer or any other cancer,
17 if you are still actively being treated or a
18 surgery is planned or you are getting Lupron
19 injections every three months, it is still
20 prostate cancer as far as coding is concerned
21 because it is still under treatment.

22 So if there is still drugs used to

1 treat something or there is still active
2 planning and treatment strategies, then that
3 is still an active diagnosis and that is how
4 it has to be thought of.

5 But as you presented in your
6 presentation, there is a lot of training
7 around this. And who gets the training? Well
8 the whole care team from the MA to the
9 specialist has to have the training.

10 DR. LARSEN: And I will just
11 comment that I have been part of a really
12 active discussion around this issue through a
13 number of CMIOs for quite a few years. I
14 previously was a CMIO at a health system. And
15 a lot of my peers were moving to think that
16 past medical history had no real use in modern
17 e-charting and they were moving to a fully
18 problem list-oriented model with attributes of
19 problems. And that we are moving to instead
20 of each individual creates their own charting
21 and that artifact lives forever, it is like a
22 Wiki and that patient care, each patient's

1 record is its own Wiki and we all are
2 responsible for editing and updating.

3 So Oregon, OHSU, was looking to
4 just decommission their past medical history
5 in their record and instead provides these
6 whole range of attributes to problems like
7 certainty. How certain am I that this thing
8 has happened? That is partly why we have
9 diagnostic terms and problem lists because we
10 don't yet have clinical certainty. We know we
11 are managing diarrhea but we don't yet know if
12 diarrhea is sprue or we don't yet if diarrhea
13 is infectious. We just say it is diarrhea
14 until such time as we actually find a
15 diagnosis like sprue.

16 Those things should be related.
17 There should be uncertainty. The more you get
18 certainty, the more that certainty should be
19 related and if, as most conditions go, they
20 kind of wax and wane through life, they aren't
21 really -- diarrhea is probably never fully
22 resolved. It was part of what happened to

1 you. So it moves into a more quiescent phase
2 and then becomes more active.

3 So this whole sort of dynamic
4 documentation is the, I think, conceptual
5 model that I have heard a lot of my peers
6 articulate. We don't yet have tools to
7 support that and we also don't have the sort
8 of training and common understanding for that.
9 But as I look ten years down the road, those
10 are the people that I am hearing and that is
11 the way that they are thinking about how this
12 will evolve.

13 MS. MEADOWS: Thank you. And
14 thank you, Dr. Butt for being so flexible. We
15 are going to get back on track now and Peggy
16 Pollard is going to talk about the experiences
17 they had at CentraHealth more from an acute
18 care point of view.

19 MS. POLLARD: Am I on? So it is
20 a pleasure to be here today to talk to you
21 about the journey kind of for a community-
22 based hospital.

1 First I would like to tell you
2 that I am highly allergic to the Asian
3 ladybug. So if I cough you will know why and
4 my first message to you is that the little
5 eagle has landed.

6 Centra is located in Central
7 Virginia. It is made up of four hospitals,
8 600 acute beds in our Lynchburg area and then
9 we have a small community-based hospital about
10 60 miles away with 110 beds. We were
11 challenged to a test for Meaningful Use by
12 October first of 2011. So we were on a very
13 fast paced journey which has caused us to do
14 some things initially evaluate and then do
15 kind of an iterative process.

16 We are a level II trauma center;
17 we see about 130,000 visits in our ED; top
18 cardiology, top orthopedic. I bring up the
19 Stroke Center of Excellence because we were
20 trying to achieve that status at the same time
21 that we were working on Meaningful Use. So by
22 aligning those two initiatives, we were able

1 to add value not only to the Meaningful Use
2 work we were trying to achieve with those
3 clinicians in that group of caregivers but to
4 help them achieve their goals at all. And
5 anytime you can make it a win/win, your
6 adoption rates are going to be far higher.
7 Magnet, most-wired, and most-wireless, which
8 is kind of an oxymoron it seems, and the first
9 to achieve Meaningful Use for our vendor.

10 So our motto is excellent care
11 every time. And so with that I say that all
12 of us have chosen healthcare and that is not
13 just a job. It is not just a profession. It
14 is more a calling and this is our legacy to
15 what we are leaving this country. So it is
16 very, very important and something we are
17 very, very passionate about.

18 In 2004, we signed a contract for
19 24 applications to bring in advanced clinical
20 technology into the organization. A 15-month
21 time line, we implemented 24 of those
22 applications at two campuses at one moment in

1 time for 6,000 users, including barcoded drug
2 administration across two hospitals on a
3 single day. We were easily able to achieve 95
4 percent barcode scanning rate within the first
5 six months. It is something that nurses
6 become passionate about as they see the safety
7 values.

8 In 2007 we brought up CPOE for the
9 two Lynchburg campuses' voluntary adoption.
10 And it was really through a group of what we
11 called our physician technology group who took
12 ownership of the content in helping us build
13 clinical decision support into the order sets
14 and into the advisors that we built that they
15 became real champions of the system. We were
16 able to reach like 75 percent adoption rate
17 very, very quickly without med rec which was
18 still on paper because they began to see the
19 value and champion it themselves.

20 In 2009 we had purchased the
21 hospital 60 miles away and were challenged to
22 change their vendor and to bring in the more

1 uniform set of clinical applications we had.
2 So on a single day we brought in 30
3 applications and introduced that to our
4 Southside campus, including barcode scanning
5 and medications. The interesting thing was
6 our hospitals were asked at that point in time
7 to start staffing that hospital as well and
8 they refused to go unless they could take CPOE
9 with them. They would not go back to paper.
10 So at that point we knew that they really then
11 had embraced the power of the technology.

12 So in 2011 we were the beta
13 partner for Meaningful Use with our vendor.
14 We went live on May 14th and began our 90-day
15 reporting on June 27th. So we had 45 days to
16 complete the final pieces of our bill and to
17 be ready to report.

18 We had tested on September 27th
19 for all campuses the same day. We had
20 received IT functionality scores of between 97
21 and 99 percent on all of our IT functionality.

22 I will tell you that the one that

1 we had the most trouble with that was that was
2 the problem list for the IT functions. And it
3 is for the same reasons that Dr. Butt talked
4 about. Who owns it? Who does it? How do you
5 manage it? And how to you introduce it into
6 an organization. And we have always had the
7 motto that if you make it easy to do the right
8 thing, people will do the right thing. So
9 when we had built those order sets in 2007,
10 particularly our specialist had added the most
11 frequent diagnosis to their order set and it
12 was picked as a free text but that was a
13 communication to the care team and it was a
14 communication to coders of what they were
15 actually thinking on this patient.

16 When we took that away from them
17 and then gave them a SNOMED search, what we
18 found was we actually lost the specificity of
19 their diagnosis. Now they were picking CHF
20 rather than the more refined diagnosis they
21 had been doing because it wasn't as easy to do
22 the right thing. And so that is one of the

1 things that we have really challenged
2 ourselves is how do we make it continue to
3 make it easy to do the right thing and still
4 meet the measures?

5 Quality reporting, of course, was
6 the other really upstream adventure. But we
7 had already completed a lot of the work for
8 the IT functionalities and felt pretty good
9 about it. We gave 260,000 doses of
10 medications barcoded each month at about a 99
11 percent rate. Our anesthesiologists use a
12 different system so their meds aren't captured
13 in this number, which accounts for the
14 difference. Eighty-two thousand orders were
15 being entered every month by physicians.
16 Prior to CPOE we had had a pulmonologist who
17 was handing out articles saying how dangerous
18 it was and we shouldn't be doing this and why
19 in the world were we considering CPOE.

20 Quickly, his group was one of our
21 pilot partners for this. He became a true
22 champion for the system and goes around and

1 gives talks on the improvements that they have
2 been able to give in care using CPOE.

3 So once they embrace the
4 technology and you can introduce the clinical
5 decision support that helps them do the right
6 thing, you really have some passionate users.

7 We were able to do improvements in
8 the early diagnosis of conditions such as
9 community-acquired pneumonia versus the more
10 complex pneumonias by having them do problem
11 lists and having them answer some questions as
12 part of their order entry that allowed us to
13 drive them to the core measures and to the
14 appropriate medications. We made that as an
15 advisor. It was not mandated that you use it
16 because our pulmonologists in particular had
17 said don't make me go through this flow. I
18 already know what I am supposed to. So we
19 made it voluntary but we find that over 85
20 percent, even with the pulmonologists, all
21 diagnosis for pneumonia go through those
22 questions because they have found that by

1 doing that they stop and they think it makes
2 them be much more definitive in the pneumonia
3 and choose the right treatment. And we were
4 already working towards that stroke center of
5 excellence so we were able to champion those
6 users in that process to drive the quality
7 measures there.

8 So here was the challenges that we
9 face as an inpatient setting. Who owns the
10 problem list? Since we put in CPOE, the
11 physicians have really owned the problem list
12 because they were picking it as part of their
13 admission assessment but it was free text.
14 When we moved it to a searchable SNOMED codes,
15 it took far more time and we saw their
16 adoption of it drop dramatically. So of
17 course nurses then were used to kind of shore
18 that up until we could get them back on track.

19 Doctors didn't know SNOMED, coders
20 didn't know SNOMED, and nurses didn't know
21 SNOMED. So the nomenclature that we had
22 picked was foreign to everyone. And so what

1 we found was once again the specificity of
2 what was being picked was far more generic
3 because they weren't sure how to do the
4 translation easily. And so that was one of
5 the biggest challenges I think we had in the
6 whole process was trying to get them to
7 understand this new methodology for picking
8 the correct thing. Doctors felt that since
9 they didn't have that quick pick as part of
10 their order sets that they had built, they had
11 designed, that they had taken a step back.

12 Initially the problem list became
13 far, far more generic. One of the challenges
14 based on what Dr. Butt was saying is when you
15 are starting out on the Meaningful Use journey
16 and you are seeing these patients for the
17 first time, getting the problem list is easier
18 than that second and that third admission.
19 Because I probably get 40 calls a month from
20 hospitals saying who do you do problems? How
21 do you do quality measures? We are really
22 struggling with this. You know, most

1 hospitals I can tell you that call me are
2 having nurses do the problem lists. And so
3 they are getting the nurses to do the initial
4 problem lists and they feel pretty good about
5 that. But when the patient comes back in and
6 they are doing that as part of that admission,
7 then the nurses do not feel comfortable saying
8 is this resolve, is this chronic, or is this
9 acute. So at that point, it becomes a very
10 static list because the nurses do not feel
11 comfortable updating that kind of differential
12 designation for that initial condition.

13 IT functionality versus quality
14 needs for the problem identification, how do
15 we align the EMRs to make the clinicians
16 easier to do that right thing, to do that more
17 specific diagnosis that gets us to more acute
18 and pertinent clinical decision support. And
19 then the quality measures were perceived as
20 far, far harder to implement than the IT
21 measures. And I think because it was very
22 hard for clinicians to understand the logic

1 behind what counted and what didn't.

2 I would have a physician say to me
3 I picked stroke. What happened that they
4 didn't count in this measure? Well they
5 didn't pick atherosclerosis. So they would
6 fall out of the denominator because they
7 didn't pick the two. And he is looking at me
8 and saying, if I picked occlusive stroke,
9 Peggy, then did I not say they had
10 atherosclerosis? I'm saying you had to pick
11 it for it to count. You had to select it.
12 And they are saying well that is ludicrous.
13 You just made it hard for me to do the right
14 thing again.

15 What went really well was rolling
16 out the quality measures and the IT
17 functionality incrementally as we were ready.
18 We had already done barcode scanning so we had
19 that. We had to shore up to make sure that we
20 were doing the same things in the ED as we
21 were in the inpatient for some of the measures
22 but that was kind of a given and we could kind

1 of check that off the list very, very quickly
2 that okay we don't need to concentrate on that
3 one.

4 CPOE, we knew we had that number.
5 One hundred percent of our lab was structured
6 in the database. So we could narrow down the
7 list of what we needed to work on for
8 Meaningful Use by what we had already done and
9 what was left to achieve.

10 Engaging staff, and I should have
11 put here administrators early in the
12 education. Every IT functionality, every
13 quality measure had an executive owner and we
14 gave them a score card once a week and it was
15 a stoplight for their measure and it was red,
16 yellow, or green. If they were green, they
17 loved going to the Thursday senior executive
18 meeting because they could wave their paper
19 and say we are good. If they were red, then
20 they were accountable for why are we
21 struggling with this. So it kept them very,
22 very engaged in the process and in the changes

1 that were taking place.

2 Monitor towards continuous
3 improvement. For months before we started
4 reporting and before we actually even had our
5 final certified code, I was running reports
6 out of the system every four hours. Had the
7 nurse picked the smoking status on admission?
8 Had she said if the patient had an advanced
9 directive? Did we have a height, weight, and
10 a blood pressure? Had they done the
11 medication list? And so we would call those
12 floors. My staff would actually call the
13 floor and say hey, it looks like Peggy has
14 been here for 23 hours and nobody has filled
15 in this information yet. And we gave that to
16 the charge nurse and really gave them
17 ownership for making sure that those things
18 were due.

19 So by the time we started
20 reporting, the nurses that yes, yes, yes, if
21 I don't do it I am going to get a call from
22 Peggy. And if I don't do it then, she starts

1 calling up the chain. So we were able to get
2 some rapid turnaround on those.

3 And then again, very critical was
4 the executive support.

5 What we as a community hospital
6 feel is needed. A consistent criteria. One
7 of the things I was talking to Ms. Kennedy
8 about prior to coming here is we are working
9 on an ANA Tipping Point project around
10 pressure ulcers and the prevalence study that
11 we have to do for that. For that particular
12 study, the criteria for the restraints is
13 behavioral and medical that you have to fill
14 out. For CMS, it is violent versus
15 nonviolent. So which one is the nurse
16 supposed to chart in the system? If we are
17 going to pool these things electronically we
18 have got to get to a common core set of what
19 we as clinicians feel like what is important
20 and it should be the same thing for CMS, for
21 nursing, for PT, for cardiology, whatever.
22 There should be one thing. You know, if it is

1 what is best for the patient, it should be
2 best for everybody that is measure it.

3 Discussion agreement from the
4 eMeasure Collaborative on best practice. I
5 think we would all sit here and say that best
6 practices for physicians to maintain the
7 problem list. You know that would be the most
8 accurate and it would really give us the best
9 defined picture of a patient. But if we can't
10 do that, then what are some best practices
11 that we can put in place to ensure that we are
12 doing justice to the patient and to their
13 health.

14 Documentation of the logic used by
15 the vendors. For the quality measures, I need
16 to pick up the phone and say okay, help me.
17 Walk me through how we are figuring out this
18 VTE or this measure because it is very
19 complex. It is very behind the scenes and the
20 clinicians don't understand it so they have a
21 hard time believing and trusting the numbers.

22 And then I applaud the extension

1 for Meaningful Use 2. It is very nice to have
2 the time to implement it the right way. Once
3 again, if can do the right thing for the
4 patient, most often clinicians are championing
5 the cause and right behind you.

6 So I see this as a partnership and
7 I want to tell you a story about these two
8 little boys. They are my grandsons and that
9 is Thomas and Brady. And they just moved to
10 a new city because their dad got a brand new
11 job and they were really missing their friends
12 and where they lived. So my daughter-in-law
13 has been taking them to all these fun places
14 in their new area to try to encourage them
15 that this is going to be a great place to
16 live. So this is actually an outdoor museum.
17 And on either side of these as you walk down
18 this trail there is a teepee and there is a
19 colonial village for them to see. And all of
20 a sudden out of the blue, the seven-year-old
21 Thomas reaches over and grabs Brady's hand.
22 Well of course, this does not happen often.

1 You would usually see them on the ground
2 wrestling. So my daughter-in-law captures
3 this picture. She said people were actually
4 stopping to watch them and saying awe, aren't
5 they cute.

6 Then all of a sudden Thomas, the
7 seven-year-old, looks over at Brady and says,
8 "Brady," -- and Stephanie says, I just wait
9 for the sweetness -- "have you ever been
10 convicted of a felony?"

11 (Laughter.)

12 MS. POLLARD: To which the four-
13 year-old says, "No, but I went to prison
14 once."

15 (Laughter.)

16 MS. POLLARD: And you think where
17 did they get that? Where in the world did
18 that come from?

19 Well Brady was enrolled in a new
20 preschool when he got to town and Stephanie
21 and my son, Chris, were filling out the
22 paperwork for that. And one of the questions

1 is has your son ever been convicted of a
2 felony. Now they are asking this about a
3 four-year-old. Now I hope that is not an omen
4 for the future. But Thomas had overheard them
5 having this conversation about why would they
6 be asking about a felony and what four year
7 old has ever been to prison. So he had picked
8 that up and had processed that for days and
9 days and days and so that was the conversation
10 between the two.

11 But I think in this journey
12 towards these quality measures, towards this
13 Meaningful Use, we do the same thing. We kind
14 of look at each other and say where did that
15 come from.

16 So I hope none of you have
17 committed a felony in this process. I hope
18 none of you have gone to pwison. But I do
19 think that we have got to hold hands and keep
20 going down that road towards making it better
21 for the patient every day.

22 And so the opportunity is to add

1 value to patient care in what we do. to move
2 it from excellent care every time to better
3 health all the time. Thank you.

4 (Applause.)

5 MS. MEADOWS: Peggy, thanks so
6 much. That was a great talk and thanks for
7 the humorous interjection. That was really a
8 good break for everyone. So questions for
9 Peggy?

10 DR. STUMPF: Dave Stumpf. Could
11 you describe a little bit more your technology
12 assessment score? Because at 97 percent it
13 sounds like you have got all the problems
14 solved.

15 MS. POLLARD: Well you know, like
16 I said, I run reports every four hours and
17 somebody is working those seven days a week to
18 ensure that we are meeting those.

19 But for the barcoding we had
20 already done that. Lab work we had had
21 discrete in our system since 2005. For the
22 medications and the problem list, our pharmacy

1 will not fill a prescription unless they have
2 the allergy. So that had instilled in our
3 nurses that that better be the very first
4 thing you do because if the pharmacy doesn't
5 have an allergy in their system, then they are
6 not going to send up your meds until they have
7 it. So we had had that for about four years.

8 DR. STUMPF: What is in the score
9 is what I am driving at.

10 MS. POLLARD: Pardon me?

11 DR. STUMPF: What I am driving at
12 is kind of what are you measuring with that
13 score?

14 MS. POLLARD: That score is
15 actually coming directly out of the system as
16 to the percent of unique patients that have
17 that IT measure documented.

18 So for medicines they have to have
19 an active problem list that has been updated
20 during that encounter. For allergies, they
21 have to have one codified allergy or the fact
22 that they don't have any allergies documented

1 in their system. They have to have an up-to-
2 date problem list that has been documented
3 that has been addressed during this particular
4 encounter.

5 The height, weight, blood pressure
6 has to have been done during this encounter.
7 The demographics have to be in the system for
8 the language and all of those demographic
9 features. So the smoking status is how many
10 patients came in and how many had it charted
11 within the episode of care.

12 So the IT functionality is very
13 prescriptive in how it calculates those
14 numbers. And then again like I said, the
15 quality measures there is a lot of if then
16 kind of statements that are algorithms in the
17 background that the vendor helped code into
18 their system to help you know whether or not
19 this patient actually qualifies for the
20 measure.

21 MS. MEADOWS: And just to further
22 expand on that, the nomenclature may be a

1 little bit confusing as Peggy refers to IT
2 measures. She is really talking about the
3 meaningful use objective and what the measure
4 and denominator and numerator criteria are for
5 those objectives. That might help a little
6 bit.

7 MS. SWANFELDT: Good morning.

8 Melissa Swanfeldt from MEDITECH.

9 How did you get your nurses to do
10 the problem list? That is something we get a
11 lot of pushback from our customer sites saying
12 nursing problems are different than the
13 patient problems and they should not sort of
14 be managing that. So I am curious how that --

15 MS. POLLARD: We actually had a
16 real long discussion about that. Our nurses
17 don't feel like it is within their scope to
18 enter medical problem. They want to make it
19 nick knock nander or something that they have
20 learned and feel comfortable with.

21 So we kind of took a multi-pronged
22 approach. We worked with our OB doctors and

1 our pediatricians for the nurses on the floor
2 to be able to do the laboring patients problem
3 and the newborn's problem because they are
4 very -- they are pretty common and they knew
5 what to pick.

6 For about 68 percent of our
7 patients coming into the hospital come through
8 the ED. So the doctor at the time that they
9 had dispensed the patient, the dispo-to-admit,
10 they pick the reason for admission. And so
11 they were taking that that the doctor had
12 picked out of one system and actually then
13 just reentering, the rapid admit nurses were
14 reentering that into the system. So they felt
15 like they were picking something that a doctor
16 had already said.

17 For those that don't fall into
18 that, it is my staff, the clinical informatics
19 staff, that is actually entering the problem
20 but we are quickly moving to the physicians
21 doing it themselves. We have probably about
22 50, 60 percent now being entered by doctors

1 themselves and by the end of the year it will
2 be mandated that they have to enter them.

3 MS. MEADOWS: Thank you. Kevin?

4 DR. TINOCO: Thanks, Kevin. My
5 name is Aldo Tinoco. I am with NCQA and we
6 develop quality measures for our different
7 programs and also for other programs that you
8 have heard about today.

9 I really appreciate this
10 conversation because as measure developers,
11 even those of us with health IT experience, we
12 are making a lot of assumptions as to what
13 goes in a problem list, where these diagnoses
14 that will work right here are actually found.

15 So this is very revealing. It
16 also takes me way back to my days in residency
17 when I was maintaining problem lists at the
18 VA, one of my first experiences with EHR
19 systems.

20 To your point about who owns the
21 problem list, I would like to encourage us to
22 not think about who owns the problem list but

1 who owns the individual problem. Because as
2 a physician, I would be very reluctant to
3 change the status of a problem that I wasn't
4 specifically taking care of. So there is
5 another layer of detail here.

6 MS. POLLARD: Absolutely. There
7 is another layer.

8 DR. TINOCO: Secondly, we would
9 love to hear the stories about your CPOE
10 experiences and adoption rates. My question:
11 How does the problem list, and the information
12 in the problem list, feed into other EHR
13 functions within your institution? For
14 example, must a provider select a problem from
15 the problem list as a reason for a medication
16 order or is a problem list just a nice to have
17 quick reference list in a chart that achieve
18 Meaningful Use?

19 MS. POLLARD: It does not at the
20 moment. It will when we automate the med rec
21 which is our very next project that starts in
22 October.

1 We have really done it by having
2 the physicians own the content and so there is
3 a lot of decision support. If they pick that
4 the patient has a stroke, then it fires off
5 alerts to them that hey, you haven't done this
6 yet or you haven't ordered this and allows
7 them to pick whether or not it is appropriate
8 and why. It sends off a nurse alerts that
9 they helped us write that say now you need to
10 do this education. You need to make sure you
11 go over this med with the patient. So we have
12 kind of done it as an alerting system without
13 being overly burdensome with alerts to say
14 here is what is really important and caring
15 with that patient and present that back to
16 them as part of their natural workflow. But
17 it is a challenge.

18 DR. LARSEN: I'm going to actually
19 disagree with Aldo. I think we all own the
20 problem list and I think it is the patient's
21 problem list.

22 MS. POLLARD: Yes, it is.

1 DR. LARSEN: So we actually
2 socialized that pretty aggressively where I
3 came from and everybody got to put problems in
4 the problem list and everybody got to edit
5 problems in the problem list. You were
6 instructed about what your scope of practice
7 was and so you were responsible for your own
8 scope of practice. It was always documented
9 who had one that update, so it was crystal
10 clear if it was a medical student or a nurse
11 or a doctor, or a specialist or primary care.
12 But everybody's job was to maintain that and
13 keep it active and fresh.

14 And so that is a hard
15 socialization because we are used to not
16 playing in the one sandbox. We each play in
17 our own sandbox. And then we wonder why we
18 are not coordinating in the middle.

19 So anyway, that is an aside. My
20 question for Peggy was you really wanted to be
21 able to see the logic and see details of
22 measures. I wonder if you would describe

1 your frustration a little bit more and then
2 help us think about what would be the tools
3 that would help support you as you go and
4 implement these complicated behind-the-scenes
5 measures in your organization. What would
6 make that easier for you?

7 MS. POLLARD: Well you know, if
8 you look at the HPSI spec, there is a lot of
9 if then kind of logic; which patient falls
10 into the measure, which one falls out, their
11 age, their diagnosis, lots of different
12 things.

13 So one of the things that our
14 vendor helped provide us that has become very
15 useful but it was kind of late for us because
16 of course we were the beta is flowcharts for
17 each of the measures that help walk through in
18 kind of a picture form about here is -- if you
19 answer yes or no to that, then this is how you
20 would fall in or this is how you would fall
21 out. It really helps to be able to take that
22 to a meeting with clinicians to say this is

1 why this patient didn't get added to that
2 denominator or to that numerator. But those
3 visual kinds of things to help us kind of walk
4 through that logic have been invaluable in the
5 process.

6 MS. MEADOWS: And just to let
7 everybody know, we are going to go until
8 10:15, since we had a little bit of a late
9 start plus an interruption.

10 I have a question before you go
11 from the internet, so from the folks on the
12 phone. So it kind of goes along with what
13 Kevin was talking about about who owns the
14 problem list. Are nursing problems added to
15 the problem list or do they remain just on the
16 interdisciplinary plan of care?

17 MS. POLLARD: We actually separate
18 the kind of medical problem list from the
19 interdisciplinary because the
20 interdisciplinary really often has to do with
21 just that episode of care. You know, the fact
22 that the patient is on a medicine and it may

1 make them dizzy or they need to be rehydrated.
2 But it is not something that goes with the
3 patient beyond this small window.

4 If it is something that is going
5 to be chronic or something that needs to be
6 addressed across the continuum of care,
7 absolutely it goes on the problem list.

8 DR. PALEN: So I think the tension
9 here -- I'm Ted Palen from Kaiser in Denver,
10 for those who don't know me.

11 The tension is the historical
12 nature of a problem list and now moving into
13 this new era. The problem list is being used
14 for a lot of things, including care plans.
15 Ideally, and you know, you think of the care
16 plans, the nurses think about totally
17 different things than a doctor would think
18 about in a care plan. A doctor would probably
19 think more in the course of a treatment plan
20 or an algorithm of treatment, especially think
21 of oncology and think about the complex
22 treatment algorithms in oncology. And I am

1 speaking to the vendors in the room here.
2 What really we need is a dynamic problem list
3 that is the problems but is also linked to the
4 care plan, treatment plan, and the flow sheet
5 you are talking about. So you are not in four
6 different places entering this stuff but it is
7 a stream of consciousness so to speak in an
8 EMR that allows the problem list to be yes, a
9 list of problems, active/inactive, resolved,
10 deleted, an entry but also linking to
11 everything that is really going on with that
12 patient. And then think about a patient-
13 centered problem or care plan, or treatment
14 plan where the patient is participating from
15 home, basically, entering their own PHR type
16 of information.

17 That would be the ideal to have
18 that all linked together. Talk about
19 Meaningful Use! There is some meaningful use
20 if we can get that. And again, I am speaking
21 to the vendors here.

22 MS. POLLARD: Well it also makes

1 it easy to do the right thing.

2 DR. PALEN: Oh, yes. She
3 mentioned the inpatient/outpatient. But yes,
4 it goes without saying on that.

5 MS. POLLARD: Yes.

6 MS. BARTON: Hi. Can you hear me?

7 MS. POLLARD: Yes.

8 MS. BARTON: I am Cynthia Barton
9 and I worked at Oklahoma Foundation for
10 Medical Quality and I am one of the eMeasure
11 developers. And I have a question about you
12 were mentioning about the algorithms that
13 would be helpful.

14 What we use to develop the
15 eMeasure or the specifications that are used
16 for the paper measures, what we have used for
17 the SCIP, pneumonia, the AMI, I'm trying to
18 think as because I worked on the SCIP, are
19 available on QualityNet and so I don't know.
20 I mean, I am sure you have access to those but
21 would be helpful? Would it be helpful to
22 somehow, I mean I don't know how this could be

1 done, to attach those or to just let you know
2 that they are there every time? I just can
3 only speak for what we have done at OFMQ.

4 MS. POLLARD: Sure. I think
5 anything that provides information that a
6 hospital or a physician practice doesn't feel
7 like they have to do it themselves or figure
8 it out themselves is of tremendous value and
9 it helps us standardize, if we are all looking
10 at the same documents and working on something
11 towards the same way.

12 MS. BARTON: I know that also we
13 are going to be working on additional measures
14 that most of what we have done were developed
15 by OFMQ but I think at NQF or on the NQF site,
16 there are the measure information forms and I
17 am getting ready -- we are getting ready to
18 work on the measure that we don't actually
19 have an algorithm for yet but I think that --
20 I mean, I don't know other than my own
21 experience but it is helpful to know. And I
22 don't know how that can be attached to what we

1 are doing because our output is from the
2 measure authoring tool. But that is good
3 information.

4 DR. BUTT: Yes, I was just going
5 to add to that. I think what Cynthia is
6 referring to is that in the retooled measures
7 the original measure specification manual has
8 very nice flowcharts and algorithms in it,
9 which are used for the sort of so-called paper
10 measures.

11 I think what we are saying is that
12 eMeasures hopefully as we go forward will
13 become de novo measures should have a similar
14 framework which is currently not there. And
15 I think that was in one of the summary slides
16 that I mentioned that there was that question
17 about the English version of stuff and so
18 forth. So I think it is kind of like that so
19 there needs to be a framework similar to the
20 specification manual that describes in more
21 plain English to people who are sort of
22 implementing and not necessarily as sort of

1 familiar with the HQMF or the back-end stuff.

2 MS. MEADOWS: Something like an
3 implementation guide, right? We get
4 implementation guides for many of our other
5 standards. This would really help and those
6 data flows from the measure developers would
7 be invaluable, I think, for all of us.

8 MS. BARTON: So as we go forward,
9 as we are building de novo measures and going
10 straight to the eSpecifications, it is good to
11 make sure that the people that are working on
12 those provide that kind of information also.

13 MS. MEADOWS: Absolutely. Thank
14 you, Cynthia.

15 DR. SNYDER: Hi, Chris Snyder.
16 I'm a CMIO and also a hospitalist Peninsula
17 Regional in Salisbury, Maryland. Not too far
18 from here. A frontline guy.

19 One of the things that I hear you
20 guys talking about a lot is the relationship
21 of a single entity with multiple entities. So
22 CHF patients, for example, are classic

1 problems that we deal with all the time and I
2 review a lot of coding charts to look at
3 medical necessity, make sure we get our core
4 measures correct.

5 I think one of our biggest
6 challenges is what Ted hit on and I think that
7 is a key element for physicians is you put my
8 brain on paper. I don't think of just one
9 element. I typically think of the
10 interrelationship between multiple problems.
11 We don't have a good way of taking that to
12 initiate a plan of care. Because I will be
13 honest with you, when I treat heart failure,
14 I am typically treating 12 other things and
15 they all overlap and there is a huge amount
16 of, I guess, artistic capability within that.
17 I don't know how to put that into words. I
18 think Keith would probably have a lot better
19 job at that. But some of the things he said,
20 it is not our list. It is a patient's list.
21 We are managing it basically for them and
22 advising them on it.

1 The interactions that each service
2 has is based on their source need. So as a
3 doctor, I control the majority of it but as a
4 home health agency, I would want the
5 information I needed to perform my tasks for
6 that day also because we are all individual,
7 honestly.

8 And as I work on multidisciplinary
9 teams and I am trying to educate people on
10 what I want the physician driving the care for
11 the patient who owns the care because they
12 live it every day is very challenging.

13 So I think we need to do a better
14 job of that problem list and I applaud Ted for
15 asking the vendors we need you all's help. We
16 need a tool that is very simple for me to see
17 a big picture of what is going on and how they
18 relate. And then suggestions based on hey,
19 you know, what, the orthopedic patient who has
20 got a creatinine of a 1.8 probably shouldn't
21 get that Toradol post-op. It is probably a
22 good idea that I would know that, especially

1 since they had an encounter three months ago
2 with a nephrologist I knew nothing about.

3 So we have a very difficult -- we
4 have to get a central repository for
5 information where I can practice the best
6 medicine and advise my patient that they can
7 take that information wherever they go. And
8 I know that is pie in the sky but that is what
9 I want. And this is a big group of smart
10 people. And there is a lot of vendors and
11 they will tell you guys, this is not rocket
12 science. We are not really that smart. We
13 just work well with good information.

14 MS. POLLARD: You know I think
15 what it really comes down to is the first step
16 was actually getting the information in the
17 system. And now that we are kind of getting
18 everything in the system, we are beginning to
19 see how we could leverage it to truly impact
20 healthcare. And so that is the next step and
21 you do eat the elephant one bit at a time.

22 So this is a journey but Dr.

1 Snyder is right on. We don't treat just CHF
2 or just the hip. In the hospital we are
3 treating the entire -- and in the office
4 particularly -- the entire patient. And most
5 of those things have relationships and impacts
6 on each other and somehow now that we have
7 this data in the system, we have got to figure
8 out how to be able to leverage it towards
9 better care.

10 MS. MEADOWS: Thank you so much,
11 Peggy. And thank you too, Zahid, for great
12 presentations. Great discussions from
13 everybody. Let's give everybody a big hand.

14 (Applause.)

15 MS. MEADOWS: I think it is time
16 for a break and how long are we going to take
17 Rosemary?

18 DR. KENNEDY: With that, we will
19 take a 15-minute break.

20 The restrooms are straight down
21 the hallway to the wall and turn right.

22 (Whereupon, the above-entitled

1 matter went off the record at
2 10:15 a.m. and resumed at 10:30
3 a.m.)

4 DR. DERR: The next panel is on
5 medication management and I realize it came up
6 a lot of times in the first panel. It will
7 come up all the time because the different
8 groups that I am on, the physicians always say
9 the first thing they want is medication
10 reconciliation. Don't give me anything else
11 until you give me that.

12 And med management is across the
13 whole spectrum of care. And I use the word
14 spectrum instead of continuum because we
15 really take care and longitudinal care person-
16 centric medicine, whatever is needed, at the
17 right time, at the right cost, at the right
18 acuity and continuum connotes an episodic type
19 of environment where there is a start and a
20 finish. AARP did a study in 2000 and us old
21 guys determined we didn't like continuum
22 because we don't like the finish.

1 So John Derr is my name. I help
2 Golden Living on strategic clinical
3 technology. You notice I used the word
4 technology and clinical in the same sentence
5 because I think those two functions have to be
6 harmonized. The day of the IT department
7 being a slave to operations or clinical I
8 think are over. They can help you if their
9 knowledge of technology in how to provide
10 better care and to provide better clinical
11 outcomes.

12 My experience, I am a pharmacist.
13 I first had -- for almost 50 years now I have
14 been in healthcare. My first position was
15 with Squibb where I ended up head of product
16 development and also strategic planning. Then
17 I went to Searle and Siemens and was head of
18 radiology and imaging for the instrumentation
19 part because I thought healthcare should be
20 systems, not individual silos which we are
21 finally figuring out some 50 years later, I
22 think.

1 Then I went with Tenet, which at
2 the time is called National Medical
3 Enterprises. I was head of product
4 development for international hospitals.

5 Then I went into an
6 entrepreneurial phase where I started four
7 companies. And then after that I worked a
8 little bit as a consultant to Bruce Laughrey
9 at MediSpan. I changed MediSpan in the '90s.

10 Then I became the Executive VP of
11 American Healthcare Association right after
12 PPS was done in '99 and helped to try to cut
13 down the number of cuts that were being given
14 to nursing homes. I figured long-term post-
15 acute care was the place to settle in my later
16 years because it is a place where the total
17 person is taken care of. It is not a bunch of
18 specialties and that but we take care of the
19 total person, which in my estimation is
20 longitudinal care.

21 In 2004 when President Bush's
22 Executive Order to do the HIT electronic

1 health record, I was in the audience and I
2 said to Secretary Thompson, please include us
3 in this whole thing and not just hospitals and
4 doctors and that. And he said, okay, John,
5 you coordinate long-term care. He found out
6 later he couldn't just do that but I did form
7 a group now called an LTPAC or Long-Term and
8 Post-Acute Care HIT Collaborative eight years
9 ago and we have a summit every year.

10 And I have represented on a number
11 of committees. I am on the Standards
12 Committee. I am on the HITAC Committee here.
13 I am a Trustee for CCHIT, always raising my
14 hand; don't forget the SNFs, ERFs, ALFs, the
15 LTACs, the adult care and all the other parts
16 of long-term post-acute care.

17 And I have to say right at this
18 moment very emphatically because there was
19 something in the press saying that ONC has
20 walked away from Long-Term Post-Acute Care is
21 not true. In fact, Doug Fridsma is going to
22 give me the reference to that and I am going

1 to write a rebuttal. I don't know if it was
2 the Wall Street Journal, somebody that was
3 really uninformed because Dr. Mostashari has
4 done a lot of things for us as NQF has and
5 really the failing is in the HITECH Act that
6 did not include us and consciously said they
7 did not include us. And as Shelly Spiro just
8 commented to me before, in the final rule, it
9 does include us and also in the phase Stage 3
10 of Meaningful Use, we are going to do some
11 volunteer meaningful use; the verb not the
12 noun because we don't get incentives. And we
13 are also going to do some certification type
14 of criteria that voluntarily we will adhere to
15 in our thing.

16 I work for Golden Living and I was
17 their CIO of Golden Living and CTO. And we
18 actually put in a big system because I knew at
19 the time in 2007 what the future was going to
20 be. So they are very, very up to speed on
21 electronic medical records and electronic
22 health records. If you don't know Golden

1 Living, we have over almost 400 facilities in
2 long-term post-acute care, home care, hospice
3 care, SNFs and ELFs, treating at any one
4 moment in time over 60,000 patients. So it is
5 a pretty big outfit.

6 The major objective here as you
7 will see are three things. Medication
8 management as we all know is extremely
9 important. The four presenters are going to
10 present the Kaiser presentation. There is two
11 people on the telephone so there is actually
12 there is three ghosts here at the table -- or
13 two ghosts that you don't really see. Each
14 will give 15 minutes and go through the gaps
15 because I do come from a long-term post-acute
16 care type environment, I know there is a lot
17 of gaps there. So I have sort of asked people
18 if you are going to talk about gaps that don't
19 include the eligible hospitals and eligible
20 professionals because the paper and report
21 that NQF has to do pertains to Meaningful Use
22 Stage 2. So that is the report, not futures.

1 And I get into this situation all the time.

2 But we do want to talk about gaps that might
3 include other providers than the providers
4 that we are reporting about today.

5 And so if we can, we will do 15
6 minutes of questions, or 45 minutes of
7 questions after the four presentations and
8 then do 15 minutes of gaps. And I think that
9 is all.

10 I think the key thing that I
11 always say to people that changes a lot of
12 their minds besides knowing how many providers
13 are in long-term care is think of person-
14 centric aggregated electronic longitudinal
15 care because that is really what we are aiming
16 for in the future. Where we get trending, we
17 can start the work on wellness and start the
18 work on prevention and all that.

19 And also I think it will help all
20 of us, I hope there is no lawyers in the room,
21 but I think it will help us with tort laws and
22 a lot of other things as we do quality

1 measures that are digital and we can actually
2 tell somebody that this in fact was what
3 happened not some emotional paper thing that
4 is stored off in some warehouse someplace,
5 which is what we have.

6 So I think then in patient
7 engagement, I am on one workgroup on patient
8 engagement, to get them to have some skin in
9 the game and we can do that better when we
10 show them their longitudinal record and
11 trending is going in the wrong direction and
12 give them as professional care givers what to
13 do to solve that problem and ask for their
14 cooperation.

15 So the first presentation is Jude.
16 And Jude is going to tell you he is a
17 physician in Tampa and he will give a little
18 bit more information about himself and what he
19 is going to present.

20 DR. PIERRE: Thank you, John. My
21 name is Jude Pierre. I am a practicing
22 physician in the Tampa Bay area. I work with

1 Access Healthcare Physicians. It is a multi-
2 specialty group practice in the Tampa area but
3 we also have offices and clinics in over five
4 counties. We treat over 100,000 patients.
5 And we do mainly managed care but we also to
6 fee for service as well.

7 I also have the unique position of
8 being the CEO of Phyaura, LLC, which is a
9 healthcare IT company that we set up several
10 years ago in 2004 to help really bring
11 technology to our practices and we actually
12 developed a certified EHR using an open source
13 solution.

14 So I am going to present today
15 some things that we have done uniquely in our
16 EHR to help and the discussion topics are
17 going to include medication list management,
18 how data is inputted in our EHR by the
19 patient, the provider, as well as the staff;
20 the data sources that we use for medication
21 management, which is RxNorm; and medication
22 sampling. One of the things that we have

1 developed as a way to actually document in a
2 standard codified fashion medication that we
3 sample out of our offices. Medication
4 reconciliation practices, how the process that
5 we actually use are actually coded using the
6 CPT-2 codes and also how we transfer data to
7 an HIE partner that we have. We will also
8 discuss the effectiveness of the solution,
9 challenges and what we feel are the future of
10 the systems.

11 So in the first slide, you can see
12 here is this is how we enter our medications
13 in our EHR. And if you see the checkbox that
14 says we check here to add standardized
15 medications, that allows us to actually query
16 or use the RxNorm database, using either the
17 generic name or the brand name to actually
18 enter the medications in the chart.

19 So our EHR uses RxNorm database.
20 And RxNorm is two things. It is a normalized
21 naming system for generic and branded drugs
22 and a tool for supporting semantic

1 interoperation between drug terminologies and
2 pharmacy knowledge databases. It is managed
3 by the National Library of Medicine.

4 What it enables us to do is take
5 data sources or medications from different
6 sources and bring it together to one and
7 allows us to transfer this information to
8 other systems. It contains medications for
9 many prescriptions and over-the-counter
10 medications and the RxNorm also includes
11 generic and brand medications, clinical drugs,
12 pharmaceutical products given to a patient or
13 taken by a patient with therapeutic or
14 diagnostic intent, as well as drug packs and
15 the packs contain multiple medications. It
16 does not include pharmaceutical --
17 radiopharmaceutical drugs, contrast media,
18 food, dietary supplement, medical devices or
19 other bandages. And those are really out of
20 the scope of the RxNorm.

21 So here you can see the same
22 medication list. And once a medication is

1 chosen, the RxNorm code is entered into the
2 actual problem list or the medication list
3 area. And here we could add the date, the
4 occurrence, and other attributes of that
5 medication.

6 The importance of using the RxNorm
7 code is really for transferring of information
8 to other systems, as well as a patient portal.
9 Our patient portal allows for better checks
10 and balances when reviewing medications. So
11 we have actually begun the discussion about
12 having multiple patients, multiple people
13 enter the medication or problem list into the
14 EHR. I think we have at least solved some of
15 those problems by allowing our patients to
16 actually review their medications in our
17 systems in a codified fashion, which allows
18 for improved accuracy but also patients will
19 be able to edit and delete medications that
20 they are not taking.

21 Here is an example of the patient
22 portal. We actually use a McKesson's relay

1 health solution and every patient has access
2 to a patient portal. And as you see here,
3 when they log into their site, they are able
4 to add medications. So the circled
5 medications here in red are the medicines that
6 they have added themselves to the EHR. That
7 information is then transferred back to our
8 systems and allows us to do drug-to-drug
9 interactions, allows us to do allergy checking
10 on the medicines that they are taking.

11 Here is just another example of
12 how a non-physician could enter a non-standard
13 medication and here we are entering a
14 medication or a supplement to saw palmetto.
15 And this is an example of how that medication
16 would not be transferred to the system in a
17 standard fashion.

18 One of the dilemmas that we have
19 had for several years, I have been practicing
20 for about 15 years, and this is now the first
21 time we are able to categorize and inventory
22 sample medications. There are many offices in

1 this country that actually accept samples from
2 pharmaceutical industries and there is really
3 no standard way of entering those medications
4 in a system that allows for a drug-to-drug
5 interaction. So this leads to many, many
6 different compliance issues, as well as
7 medication history tracking issues.

8 We are now able to track expiring
9 medications using the inventory system. I
10 will show you a screen shot of that. We are
11 able to assess compliance because now if a
12 patient goes to the pharmacy and fills their
13 medication six months out of the year, but
14 then the other six months they are getting
15 samples from the office because they can't
16 afford it or they are in the donut hole, then
17 we are able to actually track that they have
18 received medications from our office.

19 Adding sample medications in a
20 standard format also allows us to transfer
21 that information to the patient portal, so
22 that the patients, they may not remember that

1 they got a sample of a medication but if we
2 add it to the patient portal, they will have
3 it in their history.

4 Also a big problem that we have
5 had in the past is recalled medications.
6 So we receive these medications from the
7 pharmaceutical industry. We track them in a
8 paper notebook but if there is a recall on the
9 medicine, how do we track it? It is near
10 impossible.

11 So our offices use a simple
12 inventory process for all samples that we
13 receive. We electronically inventory them and
14 catalogue them. And here is a screen shot of
15 that. So you have the name of the medication,
16 the NDC number, the form, the lot number, as
17 well as the location and the quantity that we
18 have on-hand. So using the RxNorm codes, we
19 are able to transfer that information to the
20 patient portal and the other systems, external
21 systems.

22 In this screen shot, you see how

1 we can assess that the patient is adherent to
2 the medications by pulling the patient's name
3 or their ID number and seeing what has been
4 given to them from our offices.

5 How do we give them to the
6 patient? Well we actually use the same
7 prescription writer that we use in the EHR.
8 So we have an in-house toggle and an external
9 toggle. If it is in-house, we know that it is
10 a sample medication and we toggle that we
11 would like to add this medication to the
12 problem list. Once it is added to the problem
13 list, it is as if we are adding that
14 medication to the same section that you saw
15 earlier. So it allows us to actually really
16 categorize the medication that the patient is
17 taking in a standardized format.

18 This is an example of how we
19 reconcile medications. So it kind of speaks
20 to the same thing that I have been talking
21 about. Here is a dashboard of medications
22 that have been prescribed by the physician on

1 the right. So you have the source. The
2 source is physician and data feeds. The third
3 and fourth line of this is the data feed that
4 they receive from the EHR and the bottom
5 portion is the source of the patient. And
6 here we can easily check yes/no to determine
7 or signify whether the patient is taking the
8 medications or not.

9 You know one of the things that is
10 difficult and a friend of mine once told me
11 that physicians should have two screens; one
12 managing patients and seeing patients in the
13 office. And I didn't understand that until we
14 look at medication reconciliation or we look
15 at hospital records versus the office records.
16 Sometimes you actually do need two screens to
17 be able to really understand the nuances
18 between different lists.

19 And here is how we do it. We have
20 a split screen or on top is the EHR and the
21 bottom is the patient portal. So it allows a
22 better way of actually reconciling

1 medications.

2 So once the medications are
3 reconciled, what do you do? You have to
4 report that you have done it. There has to be
5 a standard way of actually telling the coders
6 that you have done it. So the integration of
7 the EHR with the practice management, what we
8 have on top is part of the progress note that
9 we have and we have check boxes that signify
10 what we have done. So if we have reviewed a
11 medication, the coders can then, or the
12 physician can use a drop down menu to report
13 the CPT-2 codes. Once that is reported, then
14 that goes over to the billing systems and
15 automatically gets transferred to the payers.

16 What we do also is -- what we can
17 do also is transfer the same medication lists
18 via CCDs. And this next example is an example
19 of how we have transferred a CCD of the
20 medication lists or the problem lists that we
21 have to a SyntraNet, which is an HIE system
22 used by Suncoast RHIO, a partner. And here

1 the same patient that we have been looking at
2 and their medications here in this external
3 system.

4 So again, in order for us to be
5 able to transfer this information to an
6 external system like this, you have to use a
7 codified medication list. So that is the
8 importance of using that.

9 So effectiveness of the solution.
10 The use of the patient portal interfaced with
11 the EHR allows for real-time medication
12 reconciliation. The split screens allow for
13 easy review. The use of RxNorm codes assures
14 the vendors that different vendor systems will
15 talk to each other. And using a sample
16 medication inventory allows electronic
17 tracking of medication for compliance.

18 What are the challenges that we
19 are facing? Well one of the biggest
20 challenges, and we have spoken about that in
21 the first session, is the patient getting the
22 medication entered in the system. If they are

1 not in the system, really it is not going to
2 be an accurate medication list.

3 Involving patients in the patient
4 portal can be difficult. I see a lot of
5 geriatric patients and some of them don't have
6 computers. So that is really not going to
7 help in that process.

8 Multiple screens could be
9 confusing to physicians. Most physicians or
10 a lot of physicians don't use electronic
11 health records, especially the older
12 physicians and if you throw in two screens at
13 them, they may get confused.

14 Training is critical. I think one
15 of the biggest problems that we have is in any
16 EHR implementation is training the staff and
17 dealing with the turnover of that staff.
18 There is a lot of turnover in medical offices.

19 But I feel the ideal system of the
20 future is a system that will enable physicians
21 to proactively know what they need to do
22 better patient care. So if a medication

1 reconciliation hasn't been performed in six
2 months, we should be able to get a text or an
3 email alert. Systems right now, if you
4 ePrescribe a medication or you dispense a
5 medication to a patient, there is no way to
6 actually know that the patient actually
7 received that medication from the pharmacy.
8 And that is something that we have talked to
9 our vendor, our ePrescribing vendor about.

10 How do we get a system that when a
11 patient gets a prescription sent to the
12 pharmacy that they have picked it up? So that
13 is something that I think can be easily done
14 by possibly adding a toggle in the
15 ePrescribing systems that we can then run a
16 report to see what the compliance is.

17 It is also imperative that to
18 improve the patient care and the effectiveness
19 of prior practices that we teach medical
20 professionals early on in their care
21 instruction on choosing the right health
22 system and also teaching young professionals

1 the importance of the measures that we are
2 tracking because a lot of times new physicians
3 will come out and they want to take care of
4 patients but they are really not taught that
5 and their focus when they come out is really
6 try to learn the clinical aspects but really
7 we need to start teaching the physicians early
8 on in their career the importance of the
9 systems that they choose, as well as quality
10 measures.

11 So in summary, Meaningful Use
12 standards encourage better data entry,
13 reporting and exchange of information. RxNorm
14 codes, SNOMED codes, CPT-2 codes are all
15 important and need to be taught to everyone in
16 the health systems.

17 Physicians and their staff are key
18 players when it comes to recording and
19 reviewing of medications. Future systems
20 should track and alert various aspects of
21 medication dispense and usage. So I think
22 these are all important things and hopefully

1 we can spark discussion on different aspects
2 of medication management.

3 Thank you.

4 DR. DERR: Thanks, Jude. The next
5 panelist is Ted.

6 DR. PALEN: Hi, my name is Ted
7 Palen. I am a physician internist with the
8 Colorado Permanente Medical Group in Colorado,
9 in the Denver area.

10 As was alluded to earlier, we have
11 some ethereal voices that will join us soon
12 from cyberspace, I guess. Dr. Khodor is a
13 hospitalist in the Denver metro area and Dr.
14 McGinnis is a clinical pharmacy specialist
15 concentrating on medication management issues
16 and patient safety issues. And they are going
17 to join in just a second.

18 As I introduce this, the overall
19 topic here of course that we are talking about
20 this morning is how to identify best practices
21 in doing medication management. Make
22 recommendations of how others could maybe

1 adopt some of these best practice and then of
2 course identify gaps.

3 Medication management objectives
4 are very broad. I mean this could span, as
5 Pierre alluded to, there is reconciliation.
6 There is adherence. There is drug/drug
7 interaction, drug/allergy interactions. We
8 can't cover all of that this morning.

9 And Dr. Khodor is going to talk
10 about one area of trying to understand how to
11 do medication management with keeping the
12 medication list active and eliminating
13 duplicate medications in the medication list.
14 So he is going to focus on that one area. And
15 Brandy is going to talk a little bit about med
16 adherence and some of the things she has done
17 with that.

18 So Samer, are you ready to go?

19 DR. KHODOR: Yes, I am. Good
20 morning.

21 DR. PALEN: Samer, I got the
22 control stick here for the slides.

1 DR. KHODOR: Okay.

2 DR. PALEN: So just tell me when
3 you need to go to the next slide.

4 DR. KHODOR: Okay, great. Let's
5 go to the next one. I will address a lot of
6 these objectives as we go. For the sake of
7 time, it is probably better to go on.

8 So our main focus here is that or
9 the goal is maintaining an accurate list of
10 medications in the electronic medical record.
11 And that is a key feature because we don't
12 want it in somebody's progress notes or some
13 people even add it to the list, the problem
14 list. They don't want address it where it
15 should be, which is in the actual medication
16 tab of the EMR, where it is useful for the
17 next provider. So that is our goal. It
18 sounds simple but we will talk about some of
19 the problems. So the next slide.

20 Okay, so this is, as you guys are
21 probably aware, there is a lot of studies
22 about how costly this is. Medication errors

1 cost our society a lot of money and a lot of
2 basically you know bad things happen to
3 patients when we make errors. A lot of these
4 are preventable. That is the key.

5 This is from the Institute of
6 Medicine in 2006, listing some of the errors
7 and how much it costs in terms of extra
8 hospital days per incident. And remember of
9 these will not include med errors or near
10 misses that happen in the outpatient settings
11 that are probably not reporting.

12 We know that reducing hospital
13 readmissions can happen in two major ways.
14 One is closer posts-discharge follow-up. The
15 other is medication reconciliation. And at
16 Kaiser Permanente we found that we could
17 reduce readmission by up to 16 percent so far
18 by improving the medication reconciliation at
19 the time of discharge. And these are similar
20 to other studies that have found anywhere
21 between 15 to 25 percent in reduction of
22 readmissions just by doing good medication

1 reconciliation. Next slide please.

2 So why is it important? Again,
3 medication list accuracy directly impacts
4 patient safety and quality. You have fewer
5 errors. You have better transitions of care.
6 This is between providers from the hospital to
7 SNF or between one provider to another when
8 you are covering for your partner. And again,
9 we recognize that it is an important cause of
10 hospital readmission. Next slide, please.

11 So in our process we really
12 focused on the outpatient study. The reason
13 is these are the providers that know their
14 patient the best. So as a hospitalist, I see
15 these patients when they are sick and at a
16 time of crisis and I know this patient the
17 least, probably. And so it is really the time
18 we end up doing a reactive process, which is
19 medication reconciliation and then ongoing
20 medication management, so to speak, when they
21 see their providers who know them and know
22 which medications they want them to be on.

1 Most everybody agrees that
2 medication management should occur when a
3 patient sees a provider, especially in a
4 primary care setting but it is not happening
5 consistently. So we focused on outpatient
6 settings during an office visit and what we
7 started with really is just providers, just
8 the physicians. We can add pharmacy and
9 nursing and other people for med rec at a
10 later time but we are really focusing on just
11 physicians. Next slide please.

12 So we have utilized data from day
13 one and we gathered baseline metrics to see
14 what it looked like, you know, what were the
15 problems we were having with our list. How
16 accurate are they? How much of the data can
17 we capture to capture the errors?

18 So in our use of HealthConnect or
19 Epic, these are the things that we can gather.
20 So one is we can see each provider each month
21 and see how often they used, reordered
22 medication. The other is discontinued. What

1 percentage or how often do they discontinue
2 medication?

3 Lastly is clicking meds reviewed.
4 Medications reviewed puts the name, date,
5 timestamp that I looked at the med list and
6 kind of confirms to the next person that this
7 has been reviewed.

8 These three things really support
9 good medication management. If you are
10 reordering a medication, basically that is
11 replacing a medication so it automatically
12 stops the old one and starts the new one or if
13 you discontinue a medication, that tells you
14 a couple of things. One is that they are
15 going into the medication activity part of the
16 chart, which in HealthConnect that is really
17 the only place you can make changes to the
18 medication list. You could order meds and see
19 the meds from different areas but this is the
20 only place where you could reorder or
21 discontinue. And so the other is saying if
22 you are doing some of these activities, again,

1 it is important to get medication management.

2 The other thing we do is look at
3 the actual medication list itself for each
4 provider. You know, how accurate are these
5 med lists? So what if you go and reorder or
6 discontinue, what if your medication list still
7 looks messy?

8 We looked at duplicate medications
9 because of all the errors that could exist in
10 medications, which include omissions or wrong
11 doses or titratable sigs, et cetera, et
12 cetera. Duplicates is by far the most common,
13 and really the only one that we could easily
14 capture without interviewing the provider, and
15 the patient, and the families, and so forth.
16 Just by doing chart review we can get these
17 metrics pretty easily.

18 The good news is once you teach
19 people to reconcile their meds and eliminate
20 or reduce duplicates, they usually will
21 capture some of the other errors that I have
22 alluded to.

1 And so just I will point out one
2 thing, some duplicates are okay. For instance
3 like albuterol inhaler, albuterol nebulizer.
4 You know, some of those things are going to
5 look like duplicates but they don't count
6 technically as duplicates. So we have a list
7 of some meds that we allow. The next slide.

8 This is just to show you what some
9 of the data we can gather looks like. Next
10 slide, Ted.

11 I'm not sure if you can -- okay,
12 there we go. So we can sort it by location,
13 whatever medical office, by department, by
14 provider. And this is what we look like. So
15 it takes provider A this number of office
16 visits in a month. What is the percent of
17 duplicates that they have? Back one -- we are
18 still on the other one. And I am just showing
19 you how detailed we can get our data,
20 basically, narrowed down so that we could see
21 how often they reorder, how often they
22 discontinue, et cetera.

1 And the last one shows average
2 duplicates per hundred office visits. So that
3 is kind of one of the ways we are comparing
4 providers now. It turns out to be a pretty
5 good metric. They see about a hundred
6 patients in a normal workweek. And so you
7 could see what is the average duplicate
8 medications that occur on their list per that
9 week. And that really looks at an overall
10 rate of how well they are doing in medication
11 management rather than looking at it patient
12 by patient. So we like that metric the best.
13 Next slide.

14 This is comparing our -- we took a
15 group of pilot physicians that we are working
16 with and we compared it to the rest of the
17 region. The pilot group was a group of
18 physicians from two different offices. We
19 asked to, you know, we were going to track
20 their data and get their input on the
21 processes so that we can create a good
22 process. And we compared how often they go

1 into medications activity. Again, that is
2 really the only place you could truly do med
3 rec, like discontinue or reorder and that sort
4 of activity. And while most providers and
5 patients, by the way, agree that these meds
6 should be reconciled during an office visit,
7 we see here that even with our pilots, it is
8 66 percent that go into medications activity
9 and non-pilot physicians just standard in our
10 region, 43 percent. So that is a big
11 discrepancy.

12 The other is 66 percent is good
13 but we still expect it to be higher than that,
14 during especially a primary care office visit.
15 We think that med management would be one of
16 the major activities that would take place.
17 Next slide.

18 This is clicking the medications
19 reviewed button. And again, this is an
20 activity that we think would be helpful but it
21 is not uniform. So even the pilot physicians
22 were only clicking it 42 percent and the non-

1 pilot physicians basically never click it.

2 Next slide.

3 In our objectives, we mentioned
4 the importance of adding medication management
5 on a quality dashboard. What we want is to
6 put medication management as a parameter for
7 our operational leaders to see it on a regular
8 basis, just like they see hypertension
9 control, diabetes control and other quality
10 metrics that we track for our patients to make
11 sure that we are doing a good job in terms of
12 their overall healthcare. So we think that we
13 have the data that supports good med rec. We
14 have a lot of infrastructure that I couldn't
15 mention because of time but we created a
16 process. We created a standardized of
17 teaching it by an electronic web-based tool
18 for each provider that only takes 15 minutes.
19 So we have done all these things and we have
20 gathered enough metrics that we think that our
21 operational leaders could really do a good job
22 with tracking it and to help make sure that

1 this is a sustainable process. This is an
2 example of what that might look like. So this
3 tracks average duplicates per 100 encounters
4 and you could do this by the region, you could
5 do it by department. You could do it by
6 providers. And so each leader can look at
7 these graphs accordingly. Next slide please.

8 This is just another way to look
9 at duplicate meds and this is the percent of
10 offices. It is with one or more duplicates.
11 Because this is more complicated and there is
12 a lot of things that could happen in the
13 outpatient list, we just have two different
14 ways to basically look at the duplicates. And
15 we focused on duplicates again because that is
16 where the errors usually happen. And rather
17 than following provider workflows, we thought
18 this was where the money is, in terms of this
19 is the final product. What did the list look
20 like? And that is what we hoped to
21 incentivize in the future and add it to
22 performance metrics. Next slide.

1 Okay, so we really have a role for
2 just about everyone in terms of collaboration
3 on this. We have our operational leaders. We
4 have everybody engaged. We have physicians,
5 mid-levels, pharmacy, nursing. We are working
6 with nursing to identify roles for nursing
7 like RN, LPN, MA. How could we make this more
8 of a teamwork to make the provider successful?
9 We know ultimately the provider has to be the
10 one that goes in and adjusts the med list
11 accordingly but there is a lot of things that
12 we could do and involve patients and their
13 families to get that so that by the time the
14 provider sees them, they could cut the time a
15 little bit so they could focus on all these
16 things that the patient is there to see them
17 for. Next slide.

18 DR. PALEN: I think I was going to
19 talk a little bit about this and this is
20 really the data standards that are needed if
21 we are going to do accurate med
22 reconciliation. And Pierre talked a little

1 bit about the RxNorm but there is other code
2 standards and how do we get systems to speak
3 the same codes, so to speak? And then the
4 status of medications. All of these should
5 have date and time stamps and audit trails for
6 when something is ordered, when it is
7 reordered, when it is sold, when it is
8 discontinued. And even associating a
9 diagnosis of why the medication was used, how
10 do we link that together?

11 Another big issue where there is
12 gaps is sigs are usually free text. And if we
13 are going to really do good med reconciliation
14 to know how to manage this, we have got to
15 have an understanding of how to manage sigs.
16 Medication review function is not always very
17 straightforward. As you could see the non-
18 pilot only had one percent of doing this
19 because it is not a linked function,
20 necessarily, with the normal workflow. And
21 then interoperable barriers because of
22 standards.

1 And I am going to skip over this
2 real quick because we have only got a couple
3 minutes left, is I want to get to Brandy and
4 let her talk for a minute or two about
5 medication adherence. So Brandy, do you want
6 to talk a little bit? We have about a minute
7 and a half left. So take it away.

8 DR. MC GINNIS: All right. So
9 definitely not to be all-inclusive with this
10 topic because it is a pretty huge topic to
11 begin to address, but simply to show an
12 example of collaboration when it comes to
13 medication management issues.

14 So medication adherence, why is it
15 important? Obviously we know some of these
16 statistics but it is estimated that only about
17 50 percent of patients continue their
18 medications at one year. And the unfortunate
19 part about this statistic is it hasn't changed
20 over several decades. So we know that we, as
21 providers, are not doing what we need to do to
22 address medication adherence. We know there

1 is poor outcomes and a huge cost burden to our
2 healthcare system. Thankfully, we have some
3 quality measures that are on the table and
4 some more in the pipeline that are beginning
5 to set the platform for healthcare
6 organizations to, if you will, have to address
7 medication adherence.

8 So some gaps. Probably one of the
9 biggest ones, again this is not meant to be
10 all-inclusive, but the lack of adherence data
11 in our electronic medical records. I don't
12 think Kaiser is alone in this. I think
13 probably most EMRs do not contain this type of
14 data. So although EMRs may have viewable
15 refill history such as ours, because we are
16 linked with our pharmacy system, in order to
17 determine if a patient is adherent, that takes
18 time and takes a trained eye to be able to
19 view that. And let's be frank, that is just
20 not possible for providers to do on a quick
21 basis when they have 20 minutes with a
22 patient.

1 So ideally, we need adherence
2 ratios, are days' supply remaining readily
3 viewable so that a provider can glance at the
4 medication and be able to have that
5 conversation.

6 Probably one of the other biggest
7 gaps is external Rx's. I'm not sure that we
8 have a great answer for this but definitely an
9 issue in most healthcare settings. So those
10 patients that jump from pharmacy to pharmacy,
11 how do we begin to track that for our quality
12 measures?

13 And then of course, where it all
14 begins is accurate medication lists. How do
15 we begin to have a conversation about
16 adherence, if we don't even know what our
17 patients are supposed to be on? Next slide.

18 So just some key initiatives that
19 we are doing here at Kaiser Colorado via
20 collaboration with some of our other regions.
21 We are integrating adherence data or beginning
22 to be able to integrate adherence data into

1 our electronic medical record. This will
2 allow us to have some point of service
3 activities, as well as population management
4 activities such as IVR refill reminders. We
5 also have a big push to educate both providers
6 and patients on the importance of adherence
7 and, most importantly again, collaboration
8 with our medication reconciliation initiatives
9 and medication safety initiatives, which is
10 probably one of the most important things we
11 can do in our healthcare systems is have that
12 collaboration.

13 All right, Ted, back to you.

14 DR. PALEN: Yes, so both Brandy
15 and Samer are going to stay on the line
16 through this session. So when we get to
17 question and answer period, they are available
18 to, of course myself, too, to answer your
19 questions or comments regarding this.

20 (Applause.)

21 MR. MEHTA: Okay thanks, John.

22 And I would just like to thank NQF and John as

1 well on behalf of ASHP and being brought to
2 the table on this discussion. I think it is
3 very, very important and I just appreciate the
4 fact that I get to work with such accomplished
5 individuals.

6 So first I will talk a little bit
7 about my background and myself and then the
8 society, the American Society of Health-System
9 Pharmacists and then I will go into a couple
10 of best use cases, which are probably the most
11 fun to talk about.

12 So a little bit about myself. I
13 actually did things backwards. Originally I
14 was preliminarily trained as a statistician
15 and biostatistician and then I went to
16 pharmacy school afterwards. And then I went
17 to pharmacy school afterwards. And then I
18 decided to do more clinical training and I
19 pursued a PGY1 residency that is accredited by
20 the American Society of Health-Systems
21 Pharmacists.

22 And I practiced for about two

1 years as a clinical pharmacist in different
2 health systems before I was brought on to
3 ASHP.

4 So ASHP or the American Society of
5 Health-Systems Pharmacists is a, we are about
6 40,000 members and we really advocate for the
7 safe use of medication and the safe use of
8 medication process in health systems and
9 hospitals. So really focused on patient
10 safety and that safe medication use process.

11 We advocate on behalf of our
12 members and most recently and notably we
13 partnered with other associations, including
14 ASCO and ASA on legislation that was
15 incorporated into the FDA's Safety and
16 Innovations Act that created an early warning
17 system for the crisis of drug shortages. So
18 I know that is a little outside of scope, but
19 it is important to consider depending on the
20 medication use process and even having the
21 right drugs to administer to patients. If we
22 don't have them, we can't really take care of

1 them in the health system.

2 So in terms of the best use case
3 scenarios and this was a pretty fun activity
4 because we had just finished our policy week
5 where our council members and commission
6 members came in for a week just to talk about
7 different agenda items for our members. So I
8 got to talk to a lot of different individuals
9 and ask them about their challenges with
10 respect to medication management and quality
11 measures in their health systems.

12 And one in particular came from a
13 hospital in Oregon, which was pretty advanced.
14 It is a level one trauma center, about 5050
15 inpatient beds. They had a 24-hour inpatient
16 pharmacy service, which included and consisted
17 of a decentralized pharmacists' model, so they
18 had pharmacists rounding with healthcare teams
19 in the medical and ICU units. And in this
20 health system, they also implemented barcode
21 administration and they also had CPOE in the
22 medical units and pediatric units.

1 So they are pretty up to date,
2 pretty advanced in terms of what they were
3 doing. And this allowed them to do several
4 different things in terms of preventative
5 strategies and preventative medicine.

6 So I know I have some slides just
7 describing some major themes and issues
8 surrounding medication management but as John
9 had hinted to earlier, I would like to go
10 through some of the more best use scenarios.

11 So in this health system, as I was
12 mentioning before, they had barcode
13 administration and they would also add CPOEs.
14 So it gave the pharmacist an opportunity to
15 conduct more preventative strategies. And one
16 of the major components of that is actually
17 creating their own custom library that was
18 outside the electronic medical record that was
19 easier for them to facilitate in terms of
20 communicating amongst themselves for patient
21 care and patient medication management. So
22 instead of writing to the EMR with the

1 incorporation of barcode administration, they
2 had information on what times those
3 medications were administered.

4 But that communication piece is a
5 really important gap to consider because if
6 all the clinicians involved in that patient's
7 care don't have an idea of when medications
8 were administered, it was creating problems in
9 terms of overuse and appropriate use for
10 medications. So some patients might have had
11 influenza vaccinations that were doubly
12 administered.

13 So at this one particular
14 hospital, as I sort of mentioned to you and
15 alluded to before, they created their own
16 library outside of the medication management
17 system and this allowed them to create a
18 patient acuity score or a patient complexity
19 score that contributed to ascertaining which
20 patients in the medical units and ICU units
21 were high priority in terms of monitoring
22 their medication management or medication

1 therapy. So they would require information
2 such as drug therapy monitoring, laboratory
3 monitoring which included ventolin levels,
4 warfarin monitoring. As we discussed earlier
5 this morning, 50 percent of adverse drug
6 events are preventable and are related to
7 medication management can be attributed in
8 geriatric populations to simple things such as
9 I and R monitoring for warfarin.

10 And the results of the study,
11 while I don't have them on any of the slides
12 here because they were continuously assessing
13 this type of model and that discrepancy of
14 timing of writing to the medical record and
15 the communication piece, they are really just
16 assessing internally within their division,
17 whether it would facilitate help for those
18 clinical pharmacists and whether it would
19 reduce their workload.

20 The other use case scenario that I
21 wanted to touch on a little bit from a
22 personal experience was during my residency

1 program where we were doing more antibiotic
2 stewardship monitoring and appropriate use
3 monitoring. And in this certain situation we
4 had a clinical decision support system that
5 aggregated information from the laboratory and
6 also from pharmacy in terms of which
7 medications were dispensed and specifically
8 antibiotics. And in that use case scenario,
9 we would continuously provide notes to other
10 clinicians who were involved with the patient
11 care team. But again, that timing and that gap
12 and whether or not the antibiotic was
13 administered was a real issue in determining
14 vancomycin levels and whether the therapy was
15 appropriate and whether it was discontinued on
16 time.

17 So as an overarching theme, I
18 think that sort of area of timing in
19 administration was probably one of the most
20 important gaps to consider in terms of
21 medication management just because of the
22 medication therapy monitoring systems within

1 health systems and how important pharmacists
2 are involved with that process to contribute
3 to the communication between team members and
4 inpatient care.

5 I think that is it. I can hand it
6 over to Heather.

7 (Applause.)

8 DR. SOBKO: Is the volume okay?
9 Are you sure?

10 Thanks everyone. It is a real
11 pleasure to be here. I want to especially
12 thank Rosemary Kennedy for all her great work
13 at NQF. And she is my idol so I just thought
14 I would share that with you all.

15 I'm Heather Sobko. I am nurse
16 informatician from the University of Alabama
17 at Birmingham. I am also the President and
18 CEO of IVR Care Transition Systems and I own
19 a robotics company. So we are doing lots and
20 lots of interesting electronic things to reach
21 out to patients and try to improve the way we
22 deliver healthcare across the board.

1 Today, I want to talk a little bit
2 about IVR Care Transition Systems and let you
3 know about a strategy that we implemented to
4 try to address medication issues after the
5 patient leaves our hospital setting. So we
6 are doing a much better job with patient
7 safety and medication reconciliation in the
8 inpatient setting. But the moment they leave
9 our doors, there is this big gap. What
10 happens with the patient? Often patients are
11 discharged from the hospital and they have
12 pending tests. They are waiting for results
13 on tests and medications can change within
14 hours after they leave the hospital. And now
15 we are back to square one. We don't have an
16 updated appropriate medication list.

17 So I am going to just briefly
18 touch on some of the challenges associated
19 with care transitions, talk a little bit about
20 IVR or interactive voice response technology
21 in the medication management process using IVR
22 technology to support that process and how it

1 can be used for a data capture and analysis
2 and what that means in future implications.

3 So we know that care transitions
4 are an extremely vulnerable time for patients.
5 We just don't have enough time to do
6 appropriate education and clarification,
7 particularly for medications. It is an
8 information overload. In the matter of an
9 hour, we are telling patients you need to
10 follow-up with your specialist. We want you
11 to see your primary care physician and here is
12 a list of your medications and stop these
13 meds, and start these meds, and continue your
14 home meds as well, except for the ones that we
15 have put on this list. And then here is your
16 diet and here is your exercise. See you
17 later.

18 And the patient is not feeling 100
19 percent yet but they really do want to go
20 home. So they are yes, yes. They are going
21 to sign everything and they are going to walk
22 right out the door and they don't realize that

1 they have questions particularly with complex
2 medication regimes until a couple days after
3 they get home. And they have this massive
4 amount of information. They have all these
5 papers. They pull out all their meds. They
6 do not know for themselves the difference
7 between name brand and generic meds and that
8 dosages can be different.

9 So they have problems and they
10 look at the paperwork and they say hmm, my
11 real doctor probably doesn't even know I was
12 in the hospital. I will just go back to this
13 emergency department and they will help me.
14 And of course bundled payment rules are going
15 to change that strategy very, very quickly.
16 So there is a huge need to provide some type
17 of extended support for situations just like
18 this.

19 And interactive voice response
20 technology is a very low tech technology. You
21 use a telephone. It doesn't require special
22 knowledge. It doesn't require special tools.

1 And most individuals may not have access to an
2 internet or a computer but they do have a
3 telephone. And so we chose something really,
4 really simple that levels the playing field
5 and is available pervasively. It is
6 ubiquitous. It is a telephone.

7 It overcomes some of the
8 challenges associated with health literacy.
9 You don't have to be able to read to be able
10 to have a conversation with someone or push a
11 button on your telephone. It is very cost
12 effective. It does not require a lot of extra
13 infrastructure and it is not expensive for
14 patients. It is real simple to use. It can
15 be very standardized and it is scalable. You
16 can grow a system using a phone, such as
17 interactive voice response to include just
18 about anything you might like to know.

19 We developed IVR Care Transition
20 Systems using an interactive voice response
21 platform. It is very patient-centered.
22 Patients get to choose what time they would

1 like you to call and check on them. Patients
2 enter data using their telephone key pad.
3 That information is fed through a secure
4 network to a dashboard that is reviewed by a
5 clinician. It triages for the clinician so
6 that follow-up can be provided to patients who
7 need follow-up because they are telling you
8 they need follow-up but you are monitoring all
9 your patients and the system is capturing data
10 for you. So it is helping you become more
11 efficient and helping streamline the workflow
12 processes.

13 The benefits are it has the built-
14 in triage system. It is very cost-effective.
15 You can run trending reports and learn what is
16 going on with your patients. It is a very
17 appropriate resource allocation. It fits into
18 the existing workflow and it is a plug and
19 play stand-alone system.

20 So for medication management
21 support, we devised a series of questions that
22 are automatically administered in a survey

1 fashion to patients after they leave the
2 hospital and we ask them about their
3 prescription and over-the-counter medicines,
4 about side effects they may be experiencing
5 and issues that could be associated with being
6 able to follow their medicate regime. But the
7 way we ask the question is very meaningful.
8 We don't often have conversations with
9 patients in the hospital about their ability
10 to afford medicines.

11 But an easy way to not put
12 patients on the defensive and to actually have
13 them giving you very important truthful
14 information is to say gee, since we last
15 spoke, have there been times when you missed
16 your medicines? Sure, I missed my meds. And
17 then why might that be? Maybe it's because I
18 just forgot. Maybe we need to give a little
19 bit of coaching as far as keeping your
20 medication on a structured schedule helping
21 you overcome those challenges. Maybe I am on
22 a home medication delivery system and my meds

1 don't arrive for two weeks and I don't know
2 what to do about that. Maybe they are just
3 too expensive, the side effects make me feel
4 bad, or I had to make the choice of pay the
5 power bill and buy some groceries or buy this
6 expensive med which is not being covered by my
7 insurance policy any longer.

8 So there are lots of meaningful
9 questions that we are gathering information
10 about what happens to the patient after the
11 fact. It does provide an opportunity to do a
12 medication review and we use a strategy so
13 information coming into the dashboard nurse or
14 care manager looks at the information and sees
15 that a patient has problems with their
16 medicines, provides a personal phone call.
17 And going through the medicines and comparing
18 a list is not sufficient. We actually have
19 the patients put their medicine bottles on one
20 side and as we go through information
21 together, they move the medicine over to the
22 other side. And what we are learning is that

1 there are a lot of times, going back to the
2 redundancy issue, there a lot of times when we
3 have medicines listed on our list that the
4 patient is not in the possession of and
5 sometimes the patient has five or six medicine
6 bottles and we don't have any idea that they
7 are on these meds. And come to find out,
8 these are three or four years old but the
9 patient said oh, they are in my medicine
10 cabinet. I'm supposed to take these
11 medicines. So that has been helping us solve
12 problems.

13 Very briefly, this is what the
14 dashboard looks like. It is an overview. Red
15 flag means patient has triggered they have a
16 problem. Yellow is a warning flag, maybe the
17 patient needs education. Green, everything is
18 fine. Blue, patient doesn't know an answer to
19 something. And the absent sign of information
20 simply means that for whatever reason there
21 was no data entered into that field.

22 A close-up look, you can look at

1 what has happened for Thomas Smith trending
2 over time. And a built-in documentation
3 system for clinicians to say what they did in
4 response to these issues.

5 And what we have learned in a
6 pilot study of 540 patients that were
7 randomized to usual care or 28 surveys getting
8 them through that 30-day discharge process
9 before readmission time, we had an 86 percent
10 response rate that patients actually completed
11 all 28 surveys. Very, very unusual. Why?
12 Well we let the patients choose what time they
13 would like to be called. The computer doesn't
14 really care what time it is calling you. It
15 could be 5:00 in the morning, it could be
16 10:00 at night. It is not a rescue system.
17 It is a coaching system. We are taking
18 information and we are looking at it within a
19 24-hour period and then responding to patients
20 who tell us they want our help and need some
21 help. So that was a helper.

22 We don't use a computerized voice.

1 We used a person, a real person made the
2 recording. So it is not a robotic sounding
3 voice. It was me. And patients don't like to
4 hang up on a person. They will hang up on a
5 computer but when you have a real person's
6 voice, they don't want to hang up.

7 So we kept the survey time to less
8 than four minutes per survey and we learned
9 that patients don't often know why they are
10 taking their medicines. So when you ask them
11 are your medicines helping you, they don't
12 know. Well I take it but I don't know if I am
13 really benefitting from it. And so if we
14 don't have that value built-in that it is
15 meaningful for the patient, what is the
16 incentive for them to take it? And a perfect
17 example would be for a statin medication, for
18 example, a patient doesn't feel better or
19 worse and they don't know until they have
20 their labs whether they are doing a good job
21 with controlling their cholesterol. But pain
22 medication on the other hand, if you don't

1 take your pain medication, boy you feel it
2 immediately. So there is a whole different
3 incentive for the type of medicine that you
4 are taking as to how well you are going to
5 engage in self-management.

6 We are tethering this information
7 that we are learning into the electronic
8 medical record. We are tethering it to the
9 last patient encounter so that physicians and
10 all providers logging into the system can see
11 what is happening and can weigh in on the
12 strategies for reconciling the medicines.

13 What is really, really interesting
14 is that we reduced preventable re-
15 hospitalizations by 25 percent and emergency
16 department visits by 22 percent as a result of
17 dealing with medications only. So there are
18 other reasons that patients come back to the
19 hospital; lack of follow-up care, signs and
20 symptoms, exacerbation of an underlying
21 complex problem.

22 But by addressing this in a way

1 that the patients actually liked, we started
2 asking different kinds of questions. So now
3 we are going back and looking at our discharge
4 process to understand do we need to find out
5 what is going on? Can the patient afford
6 these medicines? Well, sometimes they don't
7 know until they present to the emergency
8 department without the meds that we discover
9 how expensive they are or they go to the
10 pharmacy and they learn that it is not covered
11 under their insurance policy and so they just
12 never fill the prescription.

13 So we are learning a lot about
14 these processes. I think it is very telling
15 that patients are agreeable to use a phone
16 system that is an automated recorded phone
17 system and they did not find it overly
18 burdensome. And I am really honored to be
19 able to share with you that an 86 percent
20 response rate for 28 surveys, that is a lot of
21 data coming in.

22 We did give the patients a choice

1 for the first seven days after the hospital,
2 all patients get called daily. At the end of
3 that time, we give the patient an option in
4 the automated process, would they like to
5 continue getting a daily call or would they
6 prefer a call every third day. Forty percent
7 chose to stay with the daily call and 60
8 percent chose to switch to every third day.
9 What would be interesting and we haven't
10 evaluated the data yet is to see are there
11 differences in more intensive short-term
12 intervention 28 days in a row versus seven
13 days and then every third day they are getting
14 extended past the 30-day intervention. Is
15 there a benefit to one strategy or the other?

16 And I am happy to entertain
17 questions and again, I want to thank you for
18 the opportunity to share a little bit of
19 information about IVR Care Transition Systems.

20 (Applause.)

21 DR. DERR: Now we are in the
22 question and answer type session and we get

1 questions from the telephone and also for you
2 out there in the audience. And so I will try
3 and switch. I have got a couple questions off
4 the internet.

5 Shelly?

6 MS. SPIRO: Sure, Shelly Spiro
7 with the Pharmacy HIT Collaborative. And that
8 was really great.

9 One of the thing, the
10 Collaborative was formed in September 2010 by
11 nine of the pharmacy professional associations
12 really to address some of the pharmacists'
13 involvement in the national HIT infrastructure
14 and making sure that some of the things that
15 you are saying, Heather, in the inpatient
16 setting can we really address. And so we went
17 back and looked at the standards and worked
18 with the standards development organizations,
19 both NCPDP and HL7.

20 And one of the things most of our
21 pharmacists do medication therapy management
22 in the ambulatory setting and one of the areas

1 for our patients who are in the Medicare Part
2 D program, effective January 1, 2013, those
3 who are providing an annual comprehensive
4 medication review which is one of the
5 requirements of the Part D program, we have to
6 actually hand the patient a takeaway document.
7 And this takeaway document has an active med
8 list, has allergies, and has easy readable and
9 understandable language for instructions.

10 And so we have taken this and
11 actually have gone through the standards
12 development process and created a consolidated
13 CDA. It is in ballot now and is available.
14 It is an implementation guide that can be used
15 and actually used in all of the settings for
16 those who actually have adopted the Meaningful
17 Use of the electronic health record will
18 actually be able to use this and we are asking
19 people to begin to start to use it.

20 But the interesting thing that we
21 really worked on because we worked with CMS on
22 this also was to make sure that it was in a

1 way that the patient could either print it or
2 it can be exchanged with an electronic -- with
3 their personal health record. And the
4 instructions, it is all codified within RxNorm
5 and SNOMED also, but we added into there a
6 place where a medication list was reconciled
7 by a pharmacists, which will really help us,
8 hopefully, get to a medication reconciliation
9 issue in these points of transitions of care.

10 So I applaud the work that you are
11 doing on the IVR and I think it is a very
12 important way to bring information to the
13 patient. But again we are working from the
14 association standpoint, including ASHP as one
15 of our members or the collaborative in making
16 sure that we handle these transition of care
17 issues with our patients and especially in
18 reducing the 30-day readmission and especially
19 in keeping our patients active.

20 I was at the ONC meeting last week
21 that dealt with patient engagement. And
22 patient engagement is an area that pharmacists

1 play a very important role in and we have a
2 lot that we can do in that area. And that was
3 one thing, of all of the speakers who were at
4 this meeting had said they all had problems
5 with medication. There wasn't one person on
6 the panel list of patient advocates who said
7 they need information about their medications.
8 And it needs to be gathered from several
9 different locations, whether that is from the
10 pharmacies -- and it isn't just prescription
11 information. It is over-the-counter
12 information that is why I really applaud what
13 you are doing from an IVR standpoint because
14 that is the piece that we as pharmacists are
15 able to get from that patient and we need to
16 do a better job of finding out what
17 medications those patients are actually
18 taking.

19 DR. DERR: Thank you, Shelly. Do
20 you want to respond or anybody want to --

21 DR. SOBKO: I really appreciate
22 the vote of confidence.

1 What is interesting at UAB is we
2 have a lot of rural communities. So all of
3 our major cities line up right down the middle
4 of the state. For some of the patients that
5 come, you know UAB is 1,046 bed hospital, we
6 have specialty and primary care, patients come
7 from hundreds of miles to our hospital. Once
8 they leave, they leave they are traveling
9 great distances away and they may be visiting
10 other emergency departments, for example, that
11 this is giving us an opportunity to reach out
12 and actually follow-up a little bit more with
13 them, just because we are learning they need
14 us. They are not sick enough to stay in the
15 hospital but we can't follow them home. It is
16 absolutely preposterous to think that we can
17 do home visits at 300 miles away. So we
18 picked a very inexpensive strategy.

19 We have 54 of the 68 counties in
20 our state we see patients from those that have
21 been enrolled in this program and six
22 surrounding states. So it is Alabama,

1 Georgia, Mississippi, Louisiana, Florida and
2 Tennessee.

3 DR. DERR: So do you have -- you
4 keep using the word "we." Is this the case
5 management within the hospital or --

6 DR. SOBKO: It is.

7 DR. DERR: -- the hospitalist?

8 DR. SOBKO: It is the care
9 management department and they work directly
10 with the hospitalist department.

11 DR. DERR: Okay. Just I am going
12 to take one from the phone. This is from
13 Chris Tonozzi.

14 An issue important issue for
15 medication reconciliation is that ePrescribing
16 systems need to communication from provider to
17 pharmacy. This is for Jude. And I thought
18 that was ePrescribing was.

19 DR. PIERRE: Yes, that is what
20 ePrescribing does and that -- unless the
21 question may have been the reverse and that is
22 what I kind of alluded to is the gap in

1 determining whether or not the pharmacy has
2 dispensed medication is a big problem because
3 right now we don't know. We can send the
4 medication to the pharmacy but we don't know
5 if they are taking it.

6 DR. DERR: And also ePrescribing
7 in long-term, we are exempt from ePrescribing.
8 So positions sometimes have to have maybe two
9 systems. And of course, as you said, two
10 screens is a problem. Having two different
11 ePrescribing systems is going to be a very big
12 problem.

13 Yes, sir?

14 DR. ROBERTS: Yes, hi. I am
15 Darryl Roberts with the American Nurses
16 Association.

17 Some of the issues with medication
18 reconciliation have been, we have been working
19 on these as a group of professionals really
20 heartily since MMA 2003 started Medicare Part
21 D and started looking at MTM, medication
22 therapy management programs to keep track of

1 the chronically ill.

2 The one thing that the Pharmacy
3 Quality Alliance has tried to work through
4 over the years has been proportion of days
5 covered, the proportion of days that you
6 should have on-hand medication on-hand, versus
7 the medications you actually have on-hand.
8 One of the things Heather addressed was that
9 patients frequently have old drugs in their
10 drug cabinets that probably shouldn't be used.
11 One of the other issues insurance companies
12 are dealing with payers has been that patients
13 go in, they take their little prescription to
14 the Walmart and they get the \$4 prescription.
15 The pharmacy gets paid but the insurance
16 company is not involved. There is no feedback
17 looped back to the pharmacy, I mean back to
18 the provider. There is really no feedback
19 loop anywhere in the system that works
20 effectively.

21 And it seems that the tools that
22 we are providing to the patients, to the

1 physicians, the nurse practitioners that are
2 prescribing and to the pharmacies are pretty
3 much ineffective. But it does seem that
4 ultimately that the repository for this
5 information ought to be with the insurance
6 company that is paying or with whoever else is
7 paying, if it is the drug company, having some
8 kind of alignment among these organizations
9 that are ultimately paying should be the
10 answer to figuring out who has got what drug
11 and ensuring that that feedback loop goes back
12 to the prescriber that says, okay we at
13 Walmart gave this \$4 prescription to this
14 patient. You prescribed it. Here it is. We
15 at Kaiser paid for a \$76 prescription for this
16 and here it is.

17 The thing that seems like we won't
18 be able to get into the loop appropriately
19 probably is over-the-counter drugs. And even
20 in that case, we have over-the-counter Rx. We
21 have prescriptions that are being served over-
22 the-counter. Patients that are taking

1 Prilosec instead of the prescription brand
2 that I absolutely can't think of the name of
3 the more expensive prescription. What is it?

4 DR. SOBKO: Nexium.

5 DR. ROBERTS: Nexium, right. So
6 they are being prescribed this expensive drug
7 Nexium and instead they are taking Prilosec
8 over-the-counter because you can get 42 of
9 them for \$20 or you can get 30 Nexium for \$320
10 or whatever that costs.

11 But these types of feedbacks, with
12 the exception of the over-the-counters ought
13 to be something that we are building in as
14 quality measures for the pharmacy and as
15 quality measures for the prescriber. And if
16 those two don't link, that is the quality
17 issue.

18 DR. SOBKO: So there is another
19 issues that sometimes the payer is not always
20 involved. Sometimes people pay cash.

21 DR. ROBERTS: There is a
22 pharmacist filling it.

1 DR. SOBKO: True.

2 DR. ROBERTS: So the feedback from
3 the pharmacist to the provider that says okay,
4 you wrote it, I filled it. Have a nice day.
5 Or the insurer saying you wrote it, I paid for
6 it. Have a nice day. And these get entered
7 into the electronic health record in a way
8 that we can actually manage and track whether
9 you are getting an alpha blocker from Dr. Joe
10 and a beta blocker from the nurse
11 practitioner. And you are seeing the nurse
12 practitioner as your primary care provider and
13 you are seeing Dr. Joe because he is your
14 cardiologist. And there is no reason to tell
15 the nurse practitioner because the
16 cardiologist communicates with the nurse
17 practitioner. Right?

18 (Laughter.)

19 DR. PIERRE: I think Florida has
20 addressed that in the narcotic and controlled
21 substance arena. There is a drug database now
22 that every physician in the State of Florida

1 can log into, whether or not you filled a
2 narcotic prescription in cash or if it was
3 paid by the payers.

4 I don't know what was involved in
5 getting that database up and running and who
6 is managing it but that is something that can
7 be done because we know it is being done with
8 the narcotic medications and it really doesn't
9 matter what insurance they have. It is just
10 whether or not they have received the
11 medication and who prescribed it.

12 DR. PALEN: But it is a classic
13 example because Colorado has a prescription
14 drug database too but again, it is just
15 controlled substances and again, it is not
16 interfaced to my EMR. So it is a separate
17 system I have to log into. How often am I
18 going to do that?

19 And so until we have that
20 integration of these products from pharmacy to
21 could be an inpatient pharmacy, outpatient
22 pharmacy, can be in Kaiser we have our own

1 pharmacies but I guess we have many percent of
2 our patients still going to external
3 pharmacies to fill things. There is the issue
4 of self-pay. And again, until we get a
5 unified approach on this and getting them
6 talking to teach other, there is a problem
7 with this reconciliation and adherence.

8 I mean ideally you could have days
9 supplied, how many were dispensed, and have
10 that running in the background to say oh, it's
11 flagged, it is time. You haven't filled. Why
12 aren't you filling this? But you have to have
13 the integration first.

14 DR. ROBERTS: And it seems to me
15 that this would be the forum that would start
16 that integration. If that is the best
17 practice and we know it works and we have
18 established that it works somehow, these are
19 the people that need to get it working
20 elsewhere.

21 DR. DERR: Yes. From the
22 telephone, in present EHRs to this person's

1 knowledge, when a medication is stopped, this
2 is not transmitted, only when a new medication
3 is started. And again, is there is a message
4 transmitted?

5 Again, this is a feedback loop.
6 There is a lot of the things I sat at the
7 Standards Committee on Wednesday. I listened
8 to everything that is in Stage 2 of Meaningful
9 Use and everything was a push out of
10 information. So I asked was there anything in
11 the Meaningful Use or planned in the
12 Meaningful Use for receiving information.
13 Because we, a lot of people in skilled
14 nursing, we have electronics. We send back.
15 You can't receive it.

16 So there is a big gap in that and
17 they said well, they are looking at that
18 because that is trying to close the loop and
19 the Policy Committee is looking at receiving.
20 Otherwise, the hospitals and doctors shovel
21 out this information and if we don't talk
22 about receiving and interconnectivity and

1 interoperability, it is all going to some
2 abyss someplace and never be used.

3 Okay, from the microphone.

4 DR. NERELLA: Ravi Nerella. I'm a
5 physician informaticists from Mercy and a
6 hospitalist also.

7 So I have got a first question to
8 the Kaiser group. I applaud that you guys are
9 looking at med rec in the ambulatory setting
10 because I think that is definitely a large
11 proportion where that should be done and not
12 just on the inpatient side. But I guess for
13 the duplicate stuff one of the things that I
14 have seen personally when a patient comes in,
15 one of the most common duplicate medications
16 that I see is narcotics. And when I kind of
17 look up the audit trail, there is numerous
18 refills, essentially, but they are not refills
19 they are just new prescriptions put in. And
20 when I look at what they has been done either
21 the nurse or whoever entered the order from
22 the clinic was presented a duplicate alert yet

1 it was overwritten basically most of the times
2 being professional judgment. And it is
3 usually for a short-term thing.

4 And so I think my question I guess
5 to the Kaiser group is have you guys looked at
6 that, tried to address it and say why are you
7 guys not refilling this medication instead of
8 just reordering a new prescription and what
9 kind of feedback are you guys providing to the
10 physicians or the user who may have done that
11 repeatedly or in that clinic if it is one
12 clinic.

13 And then I have got another
14 question for Heather.

15 DR. PALEN: I'll start and I will
16 have Samer discuss it, too.

17 Some of it is training on how to
18 use the system. I mean if there is one way to
19 reorder a medicine without having it become a
20 new medicine and unless you do it that
21 prescribed way, you are going to get duplicate
22 medications, even though an alert comes up to

1 say there is already a medicine like this
2 ordered, are you sure you want to continue, it
3 still happens.

4 Samer, do you want to comment
5 more, since you have done more research in
6 this area?

7 DR. KHODOR: Yes. You know, after
8 the refills run out, because they do those
9 refill those, but once the refill runs out,
10 then they need a new prescription, so to
11 speak. And this is one of the things I talked
12 about reorder.

13 A lot of people will go into their
14 chart and just put a new order in. And it
15 will alert them that there is a duplicate and
16 they will just bypass it, like you were saying
17 and then they will have multiple of these
18 orders.

19 But this is why we tell them go
20 into medications activity, look at the whole
21 list and reorder that particular med if you
22 have to give them a new prescription because

1 the refills have run out, you go on that med
2 and it is actually faster.

3 You could just, again it is like
4 Ted was saying, teaching them the process.
5 And that I what we have done with this 15-
6 minute web-based tool is saying don't just go
7 order another med and create duplicates. This
8 is one of the biggest problems. And the ones
9 that have learned the system have actually
10 said it is much more efficient.

11 You could also replace meds. So
12 if you are changing the type of narcotic, you
13 could still reorder that Vicodin and replace
14 it with Percocet. It will automatically stop
15 the old one and start the new one as Percocet.
16 So it has a lot of features. It is actually
17 a shortcut for providers but that is one of
18 the ways that we are tackling it.

19 DR. NERELLA: My question to
20 Heather is -- again, love what you guys are
21 doing. My question to you is when you guys
22 talk to the patient and you are going through

1 the medication list that you have available
2 and the patient is kind of going through what
3 they have, and when there is that discrepancy
4 that say the patient is supposed to be on a
5 blood pressure medicine according to your list
6 but they don't have that bottle, how are you
7 guys, I guess, providing feedback to the
8 provider? Because one of the things that we
9 deal with is that the patient should be on it
10 because they have high blood pressure. Like
11 you were alluding to maybe because of
12 financial reasons they are not taking it. But
13 are you capturing that data and then providing
14 it back to the provider so that we can say
15 okay, we need to either have some kind of
16 intervention where we provide assistance or
17 maybe it is an education piece that maybe the
18 patient doesn't understand that. Because I
19 think that is very important.

20 And that is one of the concerns
21 that we have had with our med rec is who
22 actually does it. We are trying to get our

1 physicians to do it because I feel, as a
2 physician, it is my responsibility. But then
3 you have physicians who don't do anything.
4 And then we have other people who are like
5 well I would like to help but how do we make
6 sure that we get all of that data in there so
7 that the right person is taking the position?

8 DR. SOBKO: So since the patient
9 has already discharged from the hospital, we
10 don't want necessarily for them to come back
11 to us in the inpatient setting for the answers
12 to those questions but we are going to be held
13 responsible if they have an adverse event and
14 show back up at our doors.

15 So our strategy has been wow, that
16 is really important. We have discovered a
17 difference in what -- does your primary care
18 provider know about this? Do you have his or
19 her number? I have it right here and I can
20 give it to you. Let's make a plan that you
21 call that person today and let's practice what
22 you are going to say when you talk to them.

1 You are not going to call and say well I have
2 a medication question, rather I am a heart
3 patient, I am having shortness of breath at
4 rest and I have run out of my Lasix and I have
5 gained five pounds in 24 hours. That message
6 is going to get to the provider and they are
7 going to take care of it immediately.

8 But we have a way that we also
9 communicate to that community provider. We
10 want the patient to engage with us and learn
11 how to take an active role in better self-
12 management but we can't just change the rules
13 midstream and toss that out at them. It is a
14 process. Having the whole 30 days to work
15 with the patient is, what we are learning is
16 it is giving us enough time to do some really
17 important teaching, to get patients accustomed
18 to the fact that ah, my doctor wants to know
19 about this and cares that I am calling and I
20 need to do this.

21 DR. NERELLA: Are you guys sending
22 anything to the physician's office in

1 documentation? Because I think that is great.
2 We all know also that when a patient calls the
3 office, that is going to be relayed to the
4 nurse to finally go to the physician. You
5 know, it potentially could get missed and so
6 is there a way to close that loop?

7 DR. SOBKO: Right. So we have the
8 Cerner System. And through the Ambassador
9 Program, all of the external providers can
10 sign on to this electronic system and look at
11 the patient's records.

12 We don't send information about
13 the specifics. We send them a notification
14 that says a change has been entered into this
15 patient's medical record with regard to their
16 medications. To log on go here. And then we
17 are anticipating that we are going to have
18 dialogue.

19 We haven't run into a situation
20 yet that someone is falling through the
21 cracks. It is probably going to happen and
22 then we are going to have to learn from that

1 and figure out how to address it but we
2 haven't had that experience yet.

3 DR. DERR: Pardon me. I wasn't
4 on. Verna? Okay.

5 DR. SOBKO: It is going to be
6 available as a commercial product and it is
7 not very expensive. But we wanted to have
8 some more data and work out some interfaces
9 with the electronic medical record before we
10 actually take it that next step.

11 DR. DERR: Thank you. Yes, sir?

12 DR. GOLDBLUM: Thanks. Ken
13 Goldblum. Amongst many jobs, I am a
14 practicing geriatrician. I have two comments
15 that I get all of your reaction to. I will
16 give you both of them.

17 I personally feel that no med data
18 set in an EMR should be able to have just a
19 generic name or just brand name on a drug.
20 Everything should have both the generic and
21 the brand name. I think that is a source of
22 an incredible number of med errors. It is an

1 incredible source of duplication. I can't
2 tell you how often I get patients a med list
3 and it says amlodipine and they are taking
4 Norvasc and they stop taking their Norvasc
5 because it is not on their med list or do
6 something else crazy. So that is number one.

7 Number two is we are talking about
8 how to use an electronic medication system to
9 do med reconciliation. And I am going to
10 throw out there that I think it is impossible.
11 And the reason that I say that is because the
12 step that you are grafting on top is how
13 patients take their medicines. And that is
14 absolutely crazy. Until we fix that, we are
15 not going to ever fix reconciliation.

16 People do nutty things with their
17 medicines. They take pill A out of bottle A
18 and put it in bottle B and take pill B out of
19 bottle B and put it in bottle A. They have
20 medicines that they take when it is raining
21 out. They have medicines that they take in
22 the fall. They have narcotics that they

1 rotate on their own. The save antibiotics and
2 use them; you know, what they got for
3 bronchitis for their next cellulitis. You
4 name it, they do wacky stuff.

5 And this is not unsophisticated
6 patients. I take care of pharmacists --

7 (Laughter.)

8 DR. GOLDBLUM: -- yes. It is
9 absolutely everyone in this room. I take care
10 of pharmacists. I take care of nurses and I
11 take care of doctors. They are horrible.
12 Doctors are the worst. Every pill they take
13 they take they make a clinical decision that
14 day whether it makes sense or not to do it.
15 So it is a problem.

16 When it comes to reconciling meds
17 at an office visit, you know I have patients
18 bring in lists and bring in their pill
19 bottles. What is on their list is not what
20 they are taking. They leave medicines home
21 that they are taking. They bring in medicines
22 that they are not taking.

1 My nurse takes probably ten to 15
2 minutes per patient. I am a geriatrician. I
3 think one of the big parts of my job is to
4 stop medicine. So my patients don't have
5 horrible med lists but they are horrible
6 enough. My nurse takes a long time going
7 through it. When she gets done, I go in. I
8 do it again. Sometimes I can take my whole
9 visit doing it and find things that my nurse
10 didn't find.

11 And then the patient will leave
12 and he will say Doc, give me a list of my
13 medicines so I know what I should do. All
14 right, well we spent the last half hour doing
15 that but that is fine. We will go ahead and
16 give you a list.

17 So I can tell you, it is a huge
18 problem and I am sure I'm not telling anybody
19 who takes care of patients a secret here. So
20 I don't know how we can graft a good med
21 reconciliation system on top of this degree of
22 misuse, if you will, of medicines. So that's

1 it.

2 DR. DERR: Just one little
3 comment. Most of you might know but there is
4 a group called Senior Pharmacists out there.
5 There is about 2,000 of them that are
6 certified geriatrics that do private practice.
7 They align with a physician to do that and
8 then they do the reconciliation of their
9 medications and that. They are part of the
10 American Society of Consultant Pharmacists
11 that you can find.

12 You had a question?

13 DR. SOBKO: I wanted to -- can I
14 make a comment?

15 Just because you are a
16 geriatrician I know you will appreciate this.
17 The story of Mrs. Gallini who has been a
18 geriatric patient for 15 years. And she has
19 been very, very adherent, follows doctors'
20 orders to the letter. And her labs came back
21 really cockamamie. They were just all over
22 the place and no one could figure out what is

1 going on.

2 The doctor calls the pharmacist.
3 Is Mrs. Gallini filling her meds on time? Oh
4 yes, every time she gets every prescription
5 filled properly, never a day late.

6 So we asked Mrs. Gallini can you
7 tell us how you take your medicines? I take
8 these pills with breakfast. I take these
9 pills with lunch, 20 minutes before my meal.
10 And I take these pills at dinnertime. And
11 then I take these at hour of sleep.

12 We draw more labs. Now they are
13 cockamamie in a different direction. They are
14 just catawampus. We don't know what is going
15 on with her.

16 So we actually did a home visit.
17 And what we discovered that Mrs. Gallini was
18 taking all of her meds exactly the way she
19 said she was. And she was dumping them into
20 a giant bowl like a salad and she was --

21 (Laughter.)

22 DR. SOBKO: This is a true story

1 and we never would have known. And so the
2 context of the patient and how they are taking
3 their meds is hugely important. And there
4 they were. It was like medication tossed
5 salad and she was taking her meds, though. So
6 it can happen.

7 DR. DERR: As an old pharma guy, I
8 cringe every time somebody takes a tablet and
9 starts to grind it to put it into cottage
10 cheese or something like that because it ruins
11 the whole integrity of how the product is to
12 be absorbed.

13 Yes, sir?

14 DR. LARSEN: Yes, a couple of
15 questions, more measurement related. The
16 first is sort of a measurement kind of
17 standard or philosophical question.

18 One of the big debates that we had
19 at my organization was if a medication was
20 prescribed and therefore intended, was that
21 the truth? Or was the truth that the patient
22 was actually ingesting it? And so if I am

1 going to be held accountable for beta blockers
2 or I am going to be held accountable for
3 aspirin or highly active antiretroviral
4 therapy, what was the important thing to
5 measure, the prescription or the taking?

6 And I am curious if there is a
7 sort of standardized because I think we
8 conflate those really easily and the better we
9 get at measuring adherence, the more that is
10 going to become a primary focus that we need
11 to sort of think about in measurement.

12 DR. KHODOR: This is Samer Khodor
13 from Colorado. I can address that. That is
14 something we have talked about a lot.

15 And you know I think the first
16 thing to agree upon is the medication list
17 that the providers are prescribing in terms of
18 what do the providers want the patient to be
19 on. That is the first start. So if somebody
20 needs to be on aspirin and Plavix, they just
21 had a stent, those need to be on there just as
22 prescribed.

1 Now the patient, you are right,
2 might be doing something totally different and
3 that is in terms of adherence. Maybe they
4 can't afford it. Maybe they don't tolerate
5 it. Maybe they forgot to pick it up. There
6 is lots of things that can skew that.

7 But the first thing for the
8 medication reconciliation piece is I would
9 like that list to look exactly like what the
10 providers are prescribing first. And then if
11 the patient is not doing it, then we could
12 address it and say why aren't you doing it and
13 really educate the patient that they need to
14 take the Plavix because they just had a stent
15 or et cetera. Or say well you can't afford
16 this or you are not tolerating this and let's
17 switch this up and then we can make that
18 modification.

19 DR. LARSEN: I'm curious of others
20 with of the same thought. My organization is
21 very patient-centric in our point of view and
22 we kept saying the patient is the source of

1 truth. And by socializing that very hard when
2 we had MAs doing medication reconciliation,
3 they were very clear the patient said this is
4 what they are on. I don't care what is on the
5 list, I am doing what the patient says. They
6 are the source of truth.

7 And that created conflict between
8 the doctors who are being measured for
9 performance on what they prescribed versus us
10 being patient-centered saying that the patient
11 says they are not taking that.

12 DR. PALEN: Well this is for those
13 out in the audience, this is Ted Palen from
14 Kaiser.

15 And you know one of the issues is
16 exactly what you raised. Is it focused on
17 doing something that will create a metric that
18 can be downloaded? So I can easily hit the
19 med review button in our Epic system and it
20 documents that Dr. Palen reviewed meds on such
21 and such a date and time. But what does that
22 mean? That is the heart of the issue. It

1 could be a metric that gets down stream and
2 guess what? My numbers look great because I
3 hit that button med reviewed every time. But
4 that doesn't mean exactly what you are saying.

5 So if we think about where
6 Meaningful Use is, it really is doing what
7 Heather is doing. It is what our discharge
8 nurses are doing. You know, three days after
9 discharge they are calling patients and doing
10 this but how is that recorded? That is all,
11 you know, usually free text. There is long
12 conversations with the patient. And that is
13 the issue.

14 DR. LARSEN: Well how do we not
15 penalize Heather's organization for giving
16 much better about what patients are actually
17 doing? Because if everybody else is being
18 measured on what they are intending to do,
19 what they prescribe, but she is actually
20 measuring what the patient is doing and that
21 is a lower number. For doing good work, her
22 hospital may get lower scores and I would hate

1 that to happen.

2 DR. KHODOR: You know it comes
3 full circle, though. This is why we
4 collaborate really closely with med adherence.
5 You know, you start with that list as
6 prescribed and then you could -- well that is
7 a start. That is how you can address -- if
8 that is accurate, then you could address those
9 medications with the patient. And then figure
10 out why they are not taking it as prescribed.

11 Because if you do what the patient
12 is doing, some of those could be dangerous.
13 We have had patients in the hospital who
14 stopped taking their Plavix because they
15 didn't want to pick it up for whatever reason
16 and they just had a stent placed.

17 So first to say not to put it on
18 there and have it forgotten and have the
19 patient leave could be very dangerous. This
20 is why it really has to be the list initially
21 that is being prescribed and then that will
22 help adherence and we could get better

1 accuracy in adherence in that sense.

2 So if their patient refuses to
3 take it, that is a different scenario but at
4 least you could capture that by starting with
5 a prescribed list.

6 DR. SOBKO: The European Pharmacy
7 Coalition did something very interesting to
8 address the issue of adherence. And they
9 implemented a strategy where the prescriptions
10 go to the pharmacy and at the time that the
11 patient picks up their medications, they sign
12 what is kind of like a contract that says they
13 will take the medications as agreed, not as
14 prescribed but as agreed. And that slight
15 change started to prompt some behavioral
16 changes in the way patients were thinking
17 about their medicines because they were
18 agreeing to take something not because they
19 were told to do so but because they agreed to
20 do so. Very interesting terminology.

21 DR. MC GINNIS: Well I think it
22 speaks to a whole different paradigm of how

1 providers have to think these days. We can't
2 just tell patients what to do anymore and that
3 is what we have done for years. And I think
4 as we are seen, when we begin to talk to
5 patients and figure out what they are actually
6 doing, we find it is very different than what
7 we told them. So I think you bring up a good
8 point that it has to be patient-centered care.
9 They have to feel that they are a part and
10 that they are being heard and that they are a
11 part of the system, in order to be compliant
12 with their medications and do the things that
13 we are asking.

14 DR. DERR: And ONC says put the I
15 into health information technology and that is
16 patient engagement. It is a big thing with
17 Dr. Mostashari.

18 DR. LARSEN: A quick second
19 question which is again with measurement.

20 There is a tension here that sort
21 of best measurements that would help patients
22 and providers are very focused around

1 conditions in that specific med. So building
2 one around hypertension drugs and do you get
3 appropriate treatment and statins and you have
4 taken it right and monitored correctly. But
5 those are really hard to scale broadly.

6 So then there is a desire to build
7 broadly scaled medication measures. But those
8 have a lot of challenges in the variety of how
9 we use medicines. Some are more PRN, some are
10 absolute. Some are a little bit squishy.
11 Some are between PRN and absolute.

12 And from your standpoints, what is
13 the ideal characteristics of a measure, a
14 metric that we use in, for example, a federal
15 program around medications?

16 DR. DERR: I guess that is a major
17 question. They are going to answer that on
18 their report.

19 Rosemary?

20 DR. KENNEDY: Do you have another
21 comment in reference? Just it is a follow-up
22 to Kevin's question.

1 If you think about medication and
2 the codes around meds. And I think Kaiser
3 alluded to this and Shek, we have just come up
4 with ten different scenarios and it really has
5 implications for point of care documentation
6 and quality measurement.

7 Is it prescribed, ordered? Do you
8 want that it was reviewed? The patient
9 reported taking it as agreed upon or patient
10 reported taking it as ordered? Do you want to
11 now was it administered, dispensed, refused?
12 And it can get very complicated in terms of
13 information that is needed for care delivery
14 and then what you pull out from a quality
15 measurement perspective, based on the context
16 of what is in the in measure.

17 And it seems like on the surface
18 it would be simple but underneath the covers,
19 it is not really. So I didn't know if Kaiser
20 or Shek or anybody has any comments on that.

21 DR. PALEN: Well just those
22 metrics, think about how do you track those.

1 Again, it could be death by a thousand clicks,
2 if you are going to try to do all this and
3 record it. And again, ease of use of being
4 able to do it from both the provider's
5 perspective and the patient perspective. If
6 we have the patients linked in through a
7 portal, it is got to be easy for them, too.

8 You know as easy does all these
9 standards not only have to include the generic
10 and the brand name but maybe the color of the
11 pill. Because let me tell you, my patients
12 come in, they have no clue. I take the blue
13 one now and I take a half of the green one and
14 then I take the one with the capsule and I
15 feel this way. Well you know, that is how
16 they do their meds is by color and shape. Oh,
17 it's the triangle.

18 DR. DERR: When it turns colors,
19 they think you are trying to kill them.

20 DR. KENNEDY: But it is important
21 though because if we are tracking ordered for
22 Kaiser, you could do really well and Heather

1 will get dinged because she is really tracking
2 whether they are taking them or not and maybe
3 they are not. And they probably not for
4 Kaiser either but you will end up looking
5 better.

6 MR. MEHTA: Yes, I agree. I mean
7 for closed systems it is a lot easier I think
8 to kind of account for that, whether the
9 patient got the medication or not. But from
10 a more global perspective, I think it is
11 really just, the overall theme, I think it is
12 just the patient understanding of what that
13 medication therapy does and is doing to them.
14 And I think to capture that is just very
15 difficult just from a general perspective.

16 DR. PIERRE: And I think one of
17 the ways to combat these issues is to see the
18 patients regularly. Patients that I see in
19 the office that are admitted multiple times in
20 the hospital, I see them every week, every
21 other week. And that is a good way for me to
22 assess if they are taking the medication

1 because the more encounters I have with them,
2 the more likely I might find something that
3 maybe the reason why they are not taking the
4 medications or have them bring in their lists
5 of medications or actually the medicines
6 themselves every time they come in is helpful.

7 As far as the measures are
8 concerned, I think the easiest way to measure
9 things is by concrete data, by looking at the
10 LDL levels in patients with high cholesterol.
11 That is the easy way out. The other ways are
12 more difficult.

13 I think it is clear to me that in
14 my clinical practices, patients that are the
15 sickest get seen more often. So and that is
16 how we kind of help adhere to that. How we
17 measure that, I am not sure.

18 DR. PALEN: Brandy, do you just
19 want to talk briefly about some of the work
20 you have done on your adherence and how we are
21 using the data to really capture whether the
22 patient is taking meds or not?

1 DR. MC GINNIS: Right. So we are
2 in the very beginning stages, like I said, of
3 integrating it into our electronic medical
4 record but because we are a closed system, we
5 do have the ability to identify the patients
6 that are non-adherent with some of these
7 equality measures. And although very
8 rudimentary right now, we are doing some very
9 just basic outreach to those patients, via
10 pharmacy students or just some of our clinical
11 pharmacists to exactly what you guys have
12 talked about, to get at the heart of why they
13 are not taking the medications.

14 And time consuming? Yes. But at
15 the end of the day, talking to the patient is
16 where you are going to find out the
17 information. And so that is kind of what we
18 have been doing at this point.

19 We do, like I said, hope to have
20 the information a little more readily
21 available for providers to be able to initiate
22 those conversations at point of service, which

1 is something that I think most providers may
2 or may not do at this point because they have
3 a limited amount of time to address multiple
4 issues, much less the brown bag medications
5 list.

6 And then we also hope to tackle
7 adherence from more of a population management
8 standpoint via some type of IVR response
9 system to do refill reminders. Because we do
10 know that forgetfulness is one of the more
11 common barriers that we see with adherence.
12 So hopefully by attacking it from multiple
13 aspects we can begin to address adherence as
14 a whole.

15 DR. DERR: Yes, Dave. Just a
16 second. I also want to add the patient sees
17 the pharmacist more than they see anybody else
18 and there is rules and laws about consulting
19 with them. Encourage your patients when you
20 go to the pharmacy to pick up the refill to
21 talk to the pharmacist and make them do their
22 job, not just stand back and counting tablets

1 or something like that, but they are part of
2 that team. Many of the committees I am on I
3 am the only pharmacist on it because we keep
4 forgetting that very valuable resource that
5 goes to school for six or more years to get
6 their Pharm.D. thing.

7 David.

8 DR. STUMPF: Yes, Dave Stumpf. I
9 would encourage a little out of the box
10 thinking. You can start with the pharmacy.
11 All of these over-the-counter medicines go
12 through a cash register with a barcode and
13 data is collected. The retail people know
14 what medicines people are getting.

15 Also when we were building the new
16 Northwestern Memorial Hospital back in the
17 mid-'90s, it occurred to me why are we using
18 barcodes, because they were just coming in at
19 that point, why aren't we using RFID tags? So
20 if the wrong medicine goes through a door, the
21 alarms go off just like they do if I walk out
22 of Walmart with something I didn't pay for.

1 And why can't we use those RFID tags to figure
2 out when the patient moves the bottle in their
3 home?

4 So I would encourage a little out
5 of the box thinking. There is technology
6 that allows you to do this stuff and retail
7 industry is using them.

8 DR. DERR: We have got time for
9 about one more question. I would like to
10 bring up one issue and that is we talk a lot
11 about disease management and meds with disease
12 management but at least the patients that we
13 see and I am sure you see have comorbidities
14 and chronic care. And the quality measures
15 that are necessary are even more complex than
16 we talked about just one disease state and
17 whether there should be quality measures
18 associated with chronic care and
19 comorbidities, which just compounds the
20 question.

21 I had one more from the phone that
22 I better do to do my job here. This is for

1 you, Jude.

2 How well utilized is the patient
3 portal in your EHR system? Do you provide
4 online or telephone technical support for the
5 patients?

6 DR. PIERRE: In our practice, we
7 have got three providers in my immediate
8 practices and about 20 to 25 percent are
9 actually online with us right now and
10 communicate with us.

11 Whenever a prescription is
12 ePrescribed, it does send out an email alert
13 saying that we sent the prescription to the
14 patient's pharmacy. The vendor does support
15 the patients on the patient portal site.

16 So that's it.

17 DR. DERR: I've had a couple other
18 ones. The physicians in the Kaiser program,
19 do you also have outside physicians that
20 aren't part of the Kaiser uniform universe in
21 your system?

22 DR. PALEN: So in Colorado there

1 is the Denver-Boulder Metro Area that the
2 classic Kaiser model. We have expanded now to
3 northern Colorado and southern Colorado where
4 we have a network model where there is
5 providers in the community that are contracted
6 to provide care for the Kaiser members.

7 So there we see the gaps that we
8 are talking about. About external
9 prescriptions, how do we understand the flow
10 of that? So we have the tension both of -- we
11 have the luxury of both being a closed system
12 and a network system and the problems that go
13 along with that kind of endeavor.

14 DR. DERR: I know that one of the
15 things that the ONC is very strong on these
16 days is interconnectivity to the PHR. We
17 talked a lot about today interconnectivity to
18 an EHR. And of course the EMR is within the
19 facility.

20 So do all of you think when all of
21 you have mentioned put it in an EHR, do you
22 also mean that it has been put into the PHR?

1 DR. PALEN: So again, I will talk
2 about Kaiser. As part of the Epic system,
3 which is our EMR system that we use, there is
4 a patient portal where patients can securely
5 log in and see their active medication list.
6 And this is why Samer and a lot of other
7 people are struggling, working so hard to get
8 active med lists because when a patient logs
9 into that portal, they see their active med
10 list. And that is what they pick from for
11 request refills or see what they are on and be
12 able to manage their own health. And we have
13 60 percent of our members in the Denver-
14 Boulder area are active users of the patient
15 portal.

16 DR. DERR: And one for Shek
17 because you didn't get asked too many
18 questions.

19 Does the ASHP have any toolkits or
20 anything that people can resource on this
21 issue that you guys can provide to hospitals
22 and physician and long-term post-acute care?

1 MR. MEHTA: Yes, well specifically
2 we have a consumer website called
3 safemedication.com that is a great resource
4 just from an ambulatory and outpatient setting
5 for patients just to get more medical
6 information and drug information.

7 And then we have compendiums of
8 best practices and also our compendium on drug
9 information, AHFS, and Trissel's Handbook on
10 Injectable Drugs which is also available
11 electronically for different mobile services.

12 In terms of actually quality of
13 measurement, our website and Resource Center
14 on Quality Improvement lists how our best
15 practices align with National Quality
16 Strategy. So that is one other way.

17 But for specific toolkits and
18 bundles to track medication management within
19 hospitals and health systems, we don't have
20 anything yet.

21 DR. DERR: Okay, first thank you.
22 Final -- oh, let me get this one and then we

1 got -- I'm going over now. This is for Kaiser
2 also.

3 At Kaiser, patients can't see
4 directions on prescriptions. That's what it
5 say. That is a statement, I guess, from
6 Sherry Hearn.

7 DR. PALEN: Yes, on the KP.org web
8 portal for the patients, yes they see their
9 active med list. They don't necessarily see
10 the instructions. Again, I think this goes
11 back to the whole idea of working with vendors
12 to be able to provide information that is
13 really meaningful. No pun intended with
14 Meaningful Use. Maybe that is pun intended.

15 DR. DERR: Last question.

16 MS. MARTINS: I am Rute Martins.
17 I work for the Joint Commission. So from a
18 measure developer's perspective -- and I am
19 sorry I am going to bring this conversation
20 all the way down to the runway into the very,
21 very simple things which sometimes are the
22 details that we get hung up on for the

1 effective implementation of electronic
2 measures.

3 So from a measure developer's
4 perspective sometimes we struggle with these
5 vocabularies, such as RxNorm, that vendors and
6 providers are using at the point of care. And
7 one point that Shek made was that EHR vendors
8 don't really agree upon on the level of
9 granularity that should be used in documenting
10 medications.

11 And then also, and this is just me
12 adding, but the different context in which
13 medications are referred to. So from a
14 provider perspective and from an EHR vendor
15 perspective, which levels of granularity are
16 being used in RxNorm in terms of defining home
17 meds, in terms of defining medication
18 allergies, defining medications that are being
19 ordered and administered in the context of an
20 inpatient encounter, medications that the
21 patient is being sent home to. Because all of
22 this really impacts the level of granularity

1 with which value sets are defined in the
2 context of an eMeasure.

3 And the second part of my question
4 is we are looking at Meaningful Use Stage 2
5 measures that are as simple as did the patient
6 go home with this medication. And we don't
7 have a really clear way of conveying discharge
8 medication. Whether this is a QDM issue if it
9 trickles all the way down to the HL7 reference
10 information model where the problem is, we
11 really need mechanisms to communicate and
12 align on how this is being represented because
13 sometimes it is not. We don't really want to
14 make it hard to represent but what are EHRs
15 doing? And are they doing the same thing?

16 And how do we advance solutions to
17 standardized representation of all of these
18 concepts in these different contexts?

19 DR. DERR: A global question.

20 DR. CHARTERS: Nobody here so far
21 has mentioned Blue Button but we do have a
22 standard. There was a consumer health

1 information technology meeting a week ago
2 Monday that the whole day was just on Blue
3 Button and what that standard is.

4 So we don't have to reinvent this
5 wheel. It is not like we don't know what we
6 need to provide and what it needs to look like
7 in the way that we provide it. It is out
8 there. It is being used now. And I can tell
9 you that CMS is a big driver of that. VA and
10 DoD are both compliant with it and those are
11 pretty large healthcare delivery systems.

12 MS. HIBAY: I don't mean to sound
13 naive but what is Blue Button? am I the only
14 one who doesn't know this?

15 DR. DERR: Just go on our website.
16 There is a lot of information. There is
17 hundreds of people out there. And it has been
18 --

19 DR. CHARTERS: Rosemary, did you
20 want to address it or did you want me to speak
21 to it?

22 DR. CHARTERS: All right, what has

1 happened is that there was an agreement among
2 CMS and the VA and the Department of Defense
3 that we would come up with a low-tech text
4 file that would be human readable that would
5 present a subset of information to a patient
6 so that the patient could actually see the
7 information about them from their electronic
8 health record.

9 And so it has a standard sequence
10 in which you present information so that
11 patients will always see information in a
12 certain order and medications are a part of
13 that standard. And when we give them
14 medication information, we give them allergy
15 information because our assumption is they can
16 either view it on screen or they can print it
17 out. And now they can download electronically
18 in a machine-readable form, too, but the
19 assumption was that they wanted to have this
20 information so that they themselves could be
21 the bridge between different providers because
22 there is no continuity of care of the majority

1 of our patients.

2 So it was to give them something
3 that they could read and understand that they
4 could share with other people but to do it in
5 the same way all the time no matter which
6 source provided that information.

7 I mean in short Blue Button is
8 your demographics. It is your medication. It
9 is your lab results. It is your allergies and
10 it is done as a summary.

11 And you can chose what time frame
12 it covers. So you could go -- the default is
13 I think 15 months. Most people only want to
14 know the last 15 months of what they have
15 done. But if you wanted to set it up to go
16 all the way back to the beginning of your
17 electronic health record, you could go back
18 that far.

19 But the whole intent was to have a
20 standard way to communicate this information.
21 And I am just saying instead of asking vendors
22 what are you doing to create a standard way,

1 I would go look at what we have already done
2 because we are using it and it I already
3 working.

4 DR. KENNEDY: And just one other
5 comment. In addition to that, I think some of
6 the challenges are there are certain things we
7 collect about medications, whether they
8 ordered or administered. But then there is
9 these concepts of states and how do we capture
10 that.

11 So if a patient is discharged and
12 you wanted the discharge meds. Or if I am
13 getting a patient in CCU, I want the meds that
14 are coming from the OR orders. At different
15 states in time, it can be somewhat difficult
16 to kind of group it and get that snapshot in
17 time.

18 Because I tend not to think
19 transition meds if I am getting a patient. I
20 just tend to think the active order and I put
21 the meds on the active list. But if we wanted
22 to go back and follow a patient, a CABG

1 patient from the OR through homecare and look
2 at at different states, it could be a little
3 challenging getting that from an EHR,
4 particularly because it may not be what people
5 are thinking as they are caring for the
6 patient in that current episode, which is
7 probably a great segue into the -- Kevin is
8 going to figure it out for us in the 12:45
9 panel.

10 (Laughter.)

11 DR. DERR: This is such an
12 important subject, I think people if you have
13 other ideas, because NQF is very important as
14 somebody else commented this morning of
15 aggregating all of this information and not
16 making it in silos.

17 So there is only a few places that
18 that happens. In my LTPAC, it happens at the
19 S and I framework and at NQF. And otherwise,
20 it stays in silos out there.

21 So any other information or ideas
22 on quality measurements, please just send them

1 to Rosemary or something like that and think
2 out of the box.

3 DR. KENNEDY: Okay, John, your
4 time is up.

5 (Laughter.)

6 DR. KENNEDY: Thank you very much.
7 Round of applause for the panel.

8 (Applause.)

9 DR. KENNEDY: We will have a lunch
10 break. Let's reconvene at 12:50. Take about
11 30, 35 minutes for lunch and the second panel
12 will start then -- third panel.

13 (Whereupon, the above-entitled
14 matter went off the record at 12:24 p.m. and
15 resumed at 12:53 p.m.)

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A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

22

(12:53 p.m.)

1 MS. FRANKLIN: So the next panel,
2 Karen? I just -- I know we're going to try
3 and finish at 3:30 and respect the fact that
4 people have flights they want to get.

5 So as I said, keep eating lunch
6 and we'll go ahead and start the next panel
7 which is Data Visibility. And I'm going to
8 turn it over to, I don't know, Kevin or Karen.
9 One of them can go ahead and kick it off.

10 DR. LARSEN: I'm Kevin Larsen.
11 I'm the medical director of meaningful use for
12 the ONC, the Office of National Coordinator of
13 Health IT. And most of my team is here today
14 actually. We oversee the clinical quality
15 measures components of the -- from the ONC
16 side.

17 We work in partnership with CMS,
18 the measurement team at CMS who through the
19 EHR incentive program are really the primary
20 owners of the measures. But we help make sure
21 the data standards and the components and the
22 sort of EHR-ness of those quality measures is

1 moving and ongoing.

2 As I mentioned before my
3 background is as a CMIO and general internist
4 at a health system. I was at Hennepin County
5 Medical Center in Minneapolis where I oversaw
6 a large implementation of a hospital and a
7 number of clinics. And they actually are
8 pretty proud, they just got their HIMSS Level
9 7 accreditation a couple of weeks ago. So
10 I'll turn it over to Karen.

11 MS. NIELSEN: Hi, this is Karen
12 Nielsen. I'm privileged to be on the actual
13 committee for this particular meeting. This
14 has been an exciting time.

15 My background is that of public
16 health and for a short period of time I had
17 the pleasure of supporting CMS inpatient
18 clinical quality measures in collaboration
19 with CFMC and OFMQ. So I understand from the
20 challenge that individuals are facing moving
21 from chart abstraction into the technology
22 world.

1 I just joined Siemens just this
2 last fall and until a few months ago I thought
3 S-O-A-P, soap, was just for washing dishes.

4 (Laughter)

5 MS. NIELSEN: So, for those of you
6 who have no idea what I just said that's okay
7 because there's a huge learning curve that we
8 all have in medicine right now to understand
9 technology, its limitations, its
10 opportunities. And someday yes, we will hit
11 nirvana, but like Dr. Mostashari said it's
12 going to take some time and it's going to be
13 a little rocky. So pleased to be here.

14 DR. GOLDBLUM: Good afternoon,
15 everyone. My name is Ken Goldblum. As I've
16 said earlier I'm a practicing internist and
17 geriatrician. Most of my professional work
18 outside of my actual patient care has been
19 around physician integration specifically in
20 primary care and trying to do quality
21 improvement for primary care docs.

22 I'm the medical director for my

1 medical practice and I'm also the chief
2 medical officer for Renaissance Health Network
3 which I'll describe to you a little bit more.

4 DR. STUMPF: I'm Dave Stumpf. I'm
5 a professor at Northwestern University where
6 I chair the neurology department and was on
7 faculty practice plans and hospital boards for
8 on and off about 20 years.

9 I then spent 6 years at
10 UnitedHealth Group on the payer side with
11 their mega data, measuring quality and
12 learning lots of the problems with that data.
13 I'm now out doing consulting work. I'm still
14 teaching at Northwestern in the master's of
15 medical informatics program but I'm doing
16 consulting with our Illinois state HIE, with
17 several startup companies and I've spent quite
18 a bit of time at NQF. And that's what I'm
19 going to talk about today is primarily how
20 some of the NQF frameworks may relate to our
21 discussion today.

22 DR. LARSEN: So I'll set this up a

1 little bit. We had a hearing earlier this
2 summer around quality improvement through the
3 ONC as part of the federal advisory committee.
4 And we had a number of people talk about what
5 they need for quality improvement. And data
6 and feedback were really right up there in the
7 key needs for quality improvement.

8 And one of my favorite words I
9 learned from that was "small data." So Joe
10 Kimura who maybe some of you know who works at
11 Atrius Healthcare in Massachusetts said that
12 although his organization has big data and
13 there's a lot of interest -- they're connected
14 to Harvard -- there's a lot of interest in
15 what to do with big data, he as the
16 operational lead of their ACO is focusing on
17 small data which he said is the data that
18 people need at the front line in realtime to
19 make decisions.

20 So the interesting thing to me
21 about small data is that that's the place
22 where measurement and business analytics and

1 clinical decision support start to not be
2 distinct. Those three things start to all be
3 one interconnected set of operators that help
4 people do what we want them to do which is
5 achieve better care, better health.

6 So, one of the things we're trying
7 to think about here is how do we -- as we
8 move, as Dr. Mostashari said, from this
9 retrospective frame for measurement where 3
10 months after a hospital has discharged someone
11 tells me that their heart failure didn't get
12 the appropriate treatment to realtime
13 measurement, what does the data visibility
14 around that realtime measurement look like and
15 how does that impact my ability to improve
16 care.

17 So, one of the things we're trying
18 to do is slay this data quality dragon. And
19 this is some of the challenges that we know
20 that we have already. There's a lot of data
21 disparity across systems. Data is currently
22 in silos and there is a lot of inertia and

1 kind of incentives to keep data siloed. Some
2 of that is a business reason for keeping data
3 siloed, some of it's perceived risk around
4 loss of data.

5 There are any number of reasons
6 that data stays siloed and how do we make data
7 not be siloed. To our last talk, how do we
8 make sure everybody gets good medication
9 information all across the landscape so that
10 the patient actually sees it.

11 We also know that different users
12 of data will want to see data differently.
13 And we have those opportunities now with the
14 tools that we are using but we have to be
15 sophisticated about how to do that.

16 So, the paradigm that I've lately
17 been thinking about when I have doctors
18 complain to me about how crappy they think
19 their electronic health records are is I want
20 to think about how do we make all healthcare
21 providers work in a system that's like
22 computer-assisted flying.

1 So, we all trust jet pilots are
2 smart and talented and really know what
3 they're doing. And they used to fly jets
4 without computers. Now they fly jets with
5 computers. None of us think they're less
6 smart or less good at what they're doing. We
7 actually think that the computer is doing
8 stuff that helps them be even safer, better
9 flyers. What the computer doesn't do is give
10 them warnings and alerts and distractions that
11 keep them from their primary mission of making
12 sure the plane is in the air and lands safely.

13 How do we rethink our paradigm of
14 health IT so that all of our practitioners are
15 jet pilots and they're getting computer-
16 assisted flying so they're safer, faster,
17 better, and they're not getting lots of sirens
18 and buzzes and alerts and alarms that make
19 their life harder and make things actually in
20 the end less safe?

21 So, as we think about how to get
22 the data then we have to think about how to

1 present the data and how to present it to the
2 right persona at the right time so that it
3 truly helps them with care. This is all hard.
4 This isn't easy, this is all hard, but it's
5 doable.

6 So again, this sort of small data
7 to my mind is really the frame that has helped
8 me think about that's my goal here in the next
9 few years just like Joe Kimura's is small
10 data, to the right person, to the right place
11 at the right time.

12 MS. NIELSEN: That's a great
13 analogy. I think as all of us think back to
14 the plane landing on the Hudson River I think
15 it -- I like that analogy a lot as far as the
16 pilots because I think everybody who remembers
17 the airplane being landed on the Hudson River,
18 we know a computer didn't land that plane.
19 But, we also know that there is great
20 technology out there that can be used.

21 And as Kevin alluded to we've
22 already started to discuss some of these

1 issues surrounding the challenges of data.
2 And that's what we're going to talk about,
3 data elusivity. How do we find it? We know
4 it's out there. How can we get it?

5 How can we get it into a fashion
6 that the two computers talk to each other and
7 know what the other one is saying? And how do
8 we make sure that it gets to the point of care
9 at the right time without bombarding an
10 individual with too much information.

11 So, these -- what I want you to do
12 is just look at this particular slide real
13 quick. I apologize for those who are in the
14 back of the room and can't see it as easily.
15 I'm just going to quickly talk about these
16 five silos. And the reason that I'm bringing
17 this up now is just for you to think about as
18 we go through the two presentations.

19 You're already going to start to
20 see that we already started to touch upon some
21 of these key areas. We know that we have
22 challenges from the standpoint of discrete

1 data being available in an electronic format
2 but it's in other pieces of equipment that do
3 not talk to the EHR.

4 We know that we have structured
5 data that's available in different settings.
6 We know that for instance the ambulatory
7 system might not talk to the acute care
8 system.

9 The next one. We know data is
10 captured on paper but it's not in electronic
11 format and we need the knowledge that's in
12 that document.

13 The next, the data is captured
14 electronically but not in structured elements.
15 So that's when we can start talking about
16 natural language processing hopefully in the
17 future.

18 And then also the last one,
19 structured data are captured but they're not
20 codified.

21 And so all of these areas are key.
22 They're the current challenges we face.

1 There's different ways to approach it and our
2 two guest speakers are going to start to do
3 that today.

4 So with that I'm going to turn it
5 on over.

6 DR. GOLDBLUM: Thank you. Good
7 afternoon again, everyone. Somehow whenever
8 I speak I always get the sleepest time of the
9 day so right after lunch. I'm going to do my
10 best to try to keep everyone awake as well as
11 I possibly can.

12 I'm going to take the discussion
13 down from the level of the treetops not just
14 to the ground but actually down into the
15 trenches where doctors are doing hand-to-hand
16 combat with their EMRs trying to get them to
17 actually help to do quality improvement and
18 population management.

19 As I said, my group is Gateway
20 Medical Associates. We are 30 internists and
21 family docs. We're outside of Philadelphia.
22 We've been together since 1996.

1 We've been using Allscripts
2 Professional since 2006 and nothing I say
3 should be construed as being supportive or
4 critical of Allscripts, it's just I think
5 completely representative of what's out there.
6 We are fortunate enough to have three full-
7 time IT people without whom we probably
8 couldn't have done anything that I'm going to
9 show you.

10 We're meaningful use certified,
11 we're a Level 3 NCQA certified PCMH. We do
12 produce an internal all-patient quality report
13 but what I'm going to talk to you about today
14 is how we extract quality data from our EMR to
15 upload it to an organization called
16 Renaissance Health Network.

17 Renaissance in turn is a 260-
18 primary care doctor IPA in southeast
19 Pennsylvania. Gateway, our 30-doctor
20 practice, is a part of this larger IPA. We
21 have had an ACO-like arrangement with
22 Independence Blue Cross, the dominant payer in

1 Philadelphia since 2001. And based on our
2 work with IBC we were chosen to be a Pioneer
3 ACO at the beginning of this year.

4 The reason that we are extracting
5 quality data from our EMR is for upload into
6 a web-based application that we developed
7 ourselves that we call Population Management
8 Tool. PMT as we know it is a registry but the
9 real beauty of it is that it allows for very
10 practical and easy reporting on the practice
11 side for use for quality improvement. So once
12 we get our data into this tool we can really
13 work with it to try to improve the care we
14 give to patients.

15 Here's a screenshot from the tool.
16 I'm not going to really say a lot about this
17 tool other than that it is something that we
18 had to develop ourselves to keep all of us on
19 the same page from a quality point of view
20 because EHRs just did not do this kind of
21 thing.

22 What this shows is the given

1 quality measures that are required for any
2 given patient and it also tells you at a
3 glance what quality measures are not at goal
4 or what's incomplete.

5 This is one more quick screen from
6 the tool. And what you see here is a quick
7 list of the tests that patients are missing or
8 where they're not at goal. So this gives you
9 a little window into how it can be used for
10 quality improvement.

11 These are the data elements that
12 I'm going to quickly talk about. Most of you
13 probably recognize these as the ACO quality
14 measures that need to be reported by ACOs via
15 the GPRO tool.

16 What I'm going to do is talk about
17 each one of these in turn briefly, the
18 challenges that their collection presented to
19 us and how we solved those problems. I don't
20 claim that, you know, our solutions are
21 necessarily the best. All I'm saying is that
22 they got the job done for us.

1 These are some of the challenges
2 that we faced. And as I said I'm going to
3 illustrate each of these in turn using the
4 quality measures from the last slide.

5 I want to say one quick word about
6 denominators. Not a big challenge for ACO
7 work because we have a defined population of
8 patients but when we do our internal reporting
9 for our practice it's a big problem. EMRs,
10 even those that are really actively pruned
11 tend to become cluttered with patients who
12 just don't belong to you, whether they've
13 died, they've left your practice, they were
14 people you covered for one time in the
15 hospital. But this is a real big issue is
16 keeping track of denominators. In my opinion
17 it's almost as much of a problem as keeping
18 track of numerators.

19 So let's go ahead and talk about
20 the measures starting with vaccines. Vaccines
21 are about as simple as it gets. If a patient
22 comes into our office, we give them a vaccine,

1 we bill for it. That data automatically goes
2 into the flow sheet that you see up here on
3 the screen and we can search on it and all is
4 well.

5 But I counted, in our EMR there
6 are four different places that a doctor can
7 potentially and logically document
8 immunization. And when a patient comes into
9 the office who's had a vaccination elsewhere,
10 for example, they got their flu shot at the
11 pharmacy, or they already had their Pneumovax
12 when they became a patient of the practice,
13 our doctors can and did document in any of
14 these different places. So the challenge here
15 was standardizing where that data was
16 collected in the medical record. And we chose
17 this flow sheet as being the most logical
18 place.

19 Unfortunately, when it comes to
20 Pneumovaxes I also double-enter it because I
21 put it somewhere else that has more visibility
22 than this particular flow sheet. And you

1 know, that's probably a topic for another talk
2 is double-entering in the electronic medical
3 records.

4 Blood pressure and height/weight
5 also entered in a standard field. Everybody
6 puts them in the same place and it's
7 searchable so it's easy. But the challenge
8 here arises because when a patient's body-mass
9 index is outside of the normal range we need
10 to document that we've taken an action and we
11 need to document it in a searchable way.

12 So one way to do this is what I'm
13 showing here. You can use a CPT code. So we
14 enter here nutritional counseling into our
15 assessment and plan and if the patient's BMI
16 is out of range then we can also search on
17 this and document electronically automatically
18 that we've taken the appropriate action.

19 Cigarette smoking also fairly
20 straightforward. We have a screen where we
21 can document it. We can also choose their
22 status and we can see it easily. I don't have

1 a pointer, I'm sorry, but somewhere down there
2 toward the bottom end of the slide in social
3 history is tobacco use, never/smoker. Easy to
4 see, easy to capture.

5 And again, if a patient's a smoker
6 we have to document the action that we've
7 taken. And again here we use a CPT code that
8 exists. And even better here this is
9 something that Medicare actually pays us to do
10 so we capture the data and we get paid at the
11 same time.

12 This is a screen, a busy screen,
13 but what I want to talk about here is
14 collections of glycohemoglobins and LDL
15 cholesterols. We interface with all the major
16 hospitals in our area as well as with the
17 major commercial labs. And when they send us
18 a piece of lab data as data all is well. We
19 can search for it and it's very easy.

20 The challenge that arises here
21 though is a lot of things come to us from labs
22 that we don't interface with. So it comes in

1 as a fax and we can't search on it. So to get
2 around that what we have to do is we have to
3 recognize if we see an LDL or a
4 glycohemoglobin this is data that we might
5 want to search for. If it's a patient that's
6 involved in one of our pay-for-performance
7 programs including ACO we have to go ahead and
8 enter an order for that patient, enter the
9 result and enter a date. And poof, just like
10 magic or perhaps after 5 minutes and about 100
11 taps you've converted that fax into data.

12 And I really think that this is a
13 huge problem. The data/document divide, and
14 I know all of you speak about this all the
15 time, is just a gigantic problem. We have in
16 our EMR after 6 years 106 gigabytes of faxed
17 information that's come into our practice for
18 30 doctors in just that period of time. And
19 it's phenomenally frustrating when a patient
20 is sitting in front of you and says doc, what
21 did that echo I have 2 years ago showed and
22 you have to look in two different places to

1 try to find that result. And not only that,
2 in an electronic chart it's not even
3 searchable. So again, a topic for another day
4 but it's one of my pet peeves so I figured I'd
5 spend a second on it.

6 Depression screening is something
7 that we did not regularly do prior to our
8 Pioneer work. So here we had the opposite
9 problem of what we had with vaccines. Instead
10 of having them spread out all over the chart
11 we had to actually create a place in the chart
12 for them to go. So we created this history
13 item for depression screening. And not only
14 that, we also created three or four possible
15 actions that a doctor could take corresponding
16 to the information that we have to give to CMS
17 via the GPRO tool. And again, it's in a
18 searchable format. So we have referral to a
19 mental health provider, drug therapy, et
20 cetera.

21 And we store that data in a
22 section of the chart called health

1 maintenance. This is a very convenient area.
2 It's easily visible on the face sheet. And we
3 put all of the screening tests here so that at
4 each visit we can quickly take a peek and see
5 what screening tests that particular patient
6 may need. So depression screening is here.
7 I mentioned earlier that I double-enter
8 Pneumovax and that's because I also put this
9 here so I can with one quick glance know that
10 the patient's had their Pneumovax.

11 Falls assessment is another
12 quality measure for ACO. Like depression we
13 didn't have a place for it. We weren't even
14 really doing it on a routine basis. So again
15 we created an item. We put it here. We can
16 search for it and we can report on it.

17 This is also where we put our
18 cancer screening information. Mammography is
19 another good illustration of converting a
20 document into data. Most of these come in as
21 letters and not as data. So instead of
22 entering it the way I described that we do for

1 lab studies here we enter it into health
2 maintenance with a date and we can go ahead
3 and search on it.

4 The last thing that we put in here
5 is colonoscopy data. Colorectal cancer
6 screening was a complete nightmare. That
7 data, you know, there's so many different
8 tests and so many different places it can be
9 done. You can do a fecal occult blood test in
10 the office, in a laboratory. You can do a
11 flex sig in the office, you can do a
12 colonoscopy, hospital, outpatient surgery
13 center. And most of this data was coming in
14 as letters and it was being documented inside
15 of notes and all over the place. So what we
16 had to do was we had to get all the data and
17 put it right here into health maintenance. So
18 number one, it helps us do better care because
19 we can quickly see that the patient is or is
20 not at goal, but also it allows us to easily
21 go ahead and report. So let me jump back and
22 just go back to my list of challenges.

1 I think I've illustrated each of
2 these at least one time using the Pioneer data
3 elements. I think that what I've been able to
4 show is that there is still a lot of work that
5 needs to be done in order to make this a
6 useful process.

7 I don't claim that any of our
8 stuff is particularly elegant. In fact, some
9 of it you're probably thinking to yourself is
10 downright ugly and it is. You know, doing
11 these workarounds take a lot of time and a lot
12 of effort but at the end of the day we get our
13 data into the population management tool.
14 Once it's there we're able to work with it and
15 do quality improvement, and hopefully we're
16 going to be able to export this data using the
17 GPRO tool for CMS.

18 So, thanks for your attention.
19 Hopefully none of you fell asleep. You know,
20 I thank you for the opportunity to talk to you
21 and I hope that these examples help you
22 understand the challenges that we face. And

1 I hope that the good work that all of you are
2 doing is going to make it easier for those of
3 us that are in the trenches that are trying to
4 actually go ahead and do this important work.
5 I'll pass -- I'll get David back to where he
6 belongs.

7 DR. STUMPF: So, thank you. My
8 talk I think is going to be a little bit more
9 aspirational than the best practices that
10 we've heard about today. And they've been
11 excellent talks. So I'm going to try to talk
12 at a little bit higher level, to step up above
13 some of this fray. But I also want to talk
14 about assets that are actually available
15 today. So not pie in the sky, but things that
16 people have actually created frameworks around
17 and that we have the opportunity to deploy in
18 the real world.

19 So, I want to start with a couple
20 of reports. This IOM report came out just a
21 couple of weeks ago and their basic point
22 they're trying to make here is one that Kevin

1 made, that we really want to get to better
2 ways of capturing data in realtime and use
3 that for continuous kind of improvement.

4 One of the concepts that they
5 introduced here speaks also directly to one of
6 Kevin's points. We all know that there's an
7 amount of information in medicine that
8 overwhelms any individual provider. But what
9 this report begins to point out, that there
10 are also tasks of care that also overwhelm us.
11 We don't all know. I couldn't tell you all
12 the steps a cardiac surgeon needs to do to get
13 somebody ready for a big operation. And he
14 couldn't tell, you know, me how to take care
15 of a neurology patient with a complex problem.
16 So these tasks are the small data that I think
17 Kevin is referring to and something I'm going
18 to spend some time talking about.

19 They had a couple of
20 recommendations that came out of this recent
21 report, that the digital infrastructure really
22 needs to change. And I point out particularly

1 that more information about the delivery
2 process and the ability to document exactly
3 what an electronic system is doing. And then
4 also we need better research methodologies.
5 We need better ways of extracting this data
6 out in a manner that's going to be useful to
7 generate knowledge and really create learning
8 systems.

9 So, this is an earlier IOM report
10 that I hope most of you had a chance to see.
11 And basically this speaks to the complexity of
12 the system we work in and that it's not all
13 technology. It's people and processes. I
14 want to emphasize the process because
15 workflows are something that has in the past
16 received inappropriate attention. It's
17 certainly getting that attention now because
18 we recognize that quality is a journey, it's
19 not a single thing.

20 This came up in the discussion
21 about how do we hold people accountable for a
22 patient getting the medicine. Is it the

1 prescription, is it the dispensing, or is it
2 the patient actually taking it? You can't
3 measure that quality and improve it without
4 understanding the process.

5 And finally, we have to be able to
6 tie this stuff to the incentives that exist in
7 the system. And I think there are ways to
8 bring all of these things together.

9 What I want to start from is a
10 framework that people have kind of pussyfooted
11 around here, that there are some problems
12 here. And I'm speaking a lot towards I think
13 some vendors here and a little bit to the ONC,
14 that certification of EHRs clearly is not
15 enough. And just counting the number of
16 people who have an EHR isn't enough either.
17 That we have defects in the implementation,
18 these are difficult things for doctors and
19 hospitals to do and we don't have good
20 reporting methods of documenting those kinds
21 of defects.

22 I also would submit, and I'll talk

1 about this, that interoperability is too
2 narrowly constrained at the present time. And
3 also I want to emphasize the tasks again, that
4 these are granular units of work in healthcare
5 but we really manage many of them
6 inadequately. We need to do better.

7 So, I'd like to suggest that we
8 need to expand the definition of
9 interoperability. Merely exchanging a
10 clinical document is not straightforward.
11 It's important, there's no question about it,
12 but we see electronic systems restricting
13 access to data and not opening up their
14 material and their capabilities for others to
15 interact with in a more significant way. I
16 believe we need to get to an interoperability
17 definition that includes the ability to
18 interact like APIs do with an electronic
19 environment.

20 And finally, we can benefit by
21 having harmonized platforms. This gets to the
22 issue is the EHR really the place where we're

1 going to do most of this work. And I would
2 submit that, as you've pointed out, that EHRs
3 are not set up to do a lot of what we want to
4 do and maybe they shouldn't, but that we can
5 have platforms that ride on top of an
6 electronic health record and an ADCT system
7 and a pharmacy system and aggregate and
8 harmonize that data. And in order to do that
9 they need to be non-disruptive to the
10 underlying system, scalable and extensible.

11 And the only way you can do this
12 is by, you know, getting to what we call the
13 difference between model of use and model of
14 meaning. You have to understand the meaning
15 of that data to be able to do that kind of
16 harmonization.

17 So what I'm suggesting is, and the
18 ONC really addressed this very early on and I
19 think it's fallen a little bit by the wayside
20 is that we really need to have modular
21 capabilities. They're very desirable, that
22 you want to be able to compartmentalize

1 capabilities so that they can be managed by
2 subject matter experts who have the best
3 knowledge and the best systems for the
4 particular task at hand. That's going to
5 stimulate innovation. Just look at your iPad
6 or iPhone or your Droid and see all of the
7 innovation that occurred when you created that
8 kind of a platform.

9 And what that harmonization that I
10 talked about does is it really creates a last
11 mile where you can extract things out of
12 multiple systems, put them in a platform where
13 lots of things can run.

14 So, you can't read this and that's
15 deliberate but this is -- what I'm going to
16 talk about next is not my own stuff. This is
17 largely stuff that's come out of NQF and it's
18 the prior work there that I think does -- if
19 you look at it in a more integrative fashion
20 I think it has a lot of answers for where we
21 want to be. And I've constructed this in a
22 way that might make the picture a little bit

1 more understandable.

2 And this particular name, the
3 Person-Centered Coordination Plan, came out
4 the Integrating the Healthcare Enterprise.
5 It's still in a draft form but I think it laid
6 out four boxes that are relevant to the
7 discussion we're going to have. And what I
8 want to try to create for you here is a
9 picture of eMeasure and quality is one aspect
10 of how this system needs to work. But if it's
11 harmonized ontologically we can accomplish a
12 lot more things with that same technology.
13 And Kevin alluded to that too, of being able
14 to get the realtime perspective kind of
15 analytics. And I want to describe how I think
16 that can actually technically happen.

17 So this model has four boxes. It
18 has -- and this comes right out of the
19 coordination of care NQF framework. We have
20 the patient characteristics defined in ways
21 that are much more expansive than traditional
22 medical explanations. It includes things like

1 functional status, health literacy, their
2 beliefs and desires, et cetera, their support
3 systems and all of that. You can use those
4 patient characteristics to query and identify.

5 Let's say we have a new diagnosis
6 of diabetes. We know what to do for diabetes.
7 We have a series of rules, we have a series of
8 workflows, and we may have service agreements
9 which is in the NQF concept a relationship
10 that people have within an ACO or a medical
11 home with their collaborating providers. So
12 that we know that when we need diabetic
13 education we can call somebody on this list.

14 So you can use those analytics to
15 create a list of tasks. And those tasks in
16 the NQF model have an accountable entity and
17 they have an expected outcome. Now those
18 tasks could be sequential, they could be
19 hierarchical and but nonetheless you have
20 things at a granular level of task.

21 You then have to manage those
22 tasks and we're not going to talk a lot about

1 that but computers are very good at managing
2 tasks and tracking things through the system
3 and getting feedback and reports. And you can
4 also use this to incentivize the payment.

5 And I do want to spend just a
6 minute on that because we know how I think to
7 monetize tasks. And the issue is going to be
8 how much do we pay up front in a risk-adjusted
9 kind of payment and how much do we pay at the
10 back end based on the outcome. And also who
11 do we pay, that's where the accountable entity
12 becomes important.

13 So this, the eMeasure and quality
14 reporting document architecture as you know is
15 based on QDM, an NQF data asset. But it's
16 also been modeled in their framework for
17 clinical decision support and also in the
18 utilization assessment framework which is a
19 way of measuring workflows and something that
20 was designed to address the issue of
21 attestation. Because CMS did not want
22 attestation to be the end-all. We wanted

1 electronic health systems to be able to tell
2 us exactly what are you doing that's resulting
3 in meaningful use. That's one of my
4 recommendations at the end is that we really
5 need to pull the trigger on that.

6 I would submit that a similar
7 ontology can be used in the service
8 agreements. These are the people I'm going to
9 call on for these tasks for a whole variety of
10 other things including reimbursement and
11 privacy policies, et cetera. It's that common
12 ontologic approach that I'm trying to push
13 here today.

14 So, let's just talk about the
15 tasks themselves here. You know, tasks really
16 are the fundamental currency in healthcare and
17 it's a very simple concept. It's small data
18 as Kevin said and it contains some key
19 elements with the accountability and the
20 outcomes. And of course they can as I
21 mentioned be sequential or whatever. But the
22 granularity breaks that complexity down to

1 measurable and computable entities.

2 This didn't come out very well.

3 So, this has to do with tax generation. And
4 again, it's a fairly simple concept about how
5 you take these elements of the patient,
6 including their beliefs and desires, and try
7 to translate those into intentions which is
8 what tasks are. And there's actually a whole
9 computer science area around BDI, beliefs,
10 desires and intentions and how you begin to
11 move from those desires and intentions into a
12 specific task.

13 So here's a way to kind of
14 conceptualize how ontology can be at the
15 center of a lot of different things so that if
16 you know -- if you want to find somebody with
17 diabetes that's part of what's in the personal
18 characteristics. If you have that you can
19 also find the tasks, the workflows that we
20 usually do for patients with diabetes, you can
21 find the eMeasures that are relevant. You can
22 look at reimbursement policies, et cetera.

1 And by setting up a framework that's
2 ontologically based like this, no matter where
3 you access from the system you can get to a
4 full set of data assets that you can begin to
5 deploy.

6 So let me just give you a concrete
7 example here. And if you have an ontologic
8 engine you can do a single query that will
9 bring up all of this information with one fell
10 swoop, not having to do all kinds of lookups
11 and other things in a complex environment. An
12 ontology would allow you to start with a new
13 diagnosis of diabetes and then at the first
14 level you're pulling up all of the -- of a
15 hierarchical tree, an ontologic tree, you may
16 be then pulling up this set of rules that we
17 want to accomplish.

18 And then because the clinical data
19 is harmonized with these same ontologies you
20 immediately find, you know, here's what I see
21 in the clinical data and here's a gap. You
22 know, something isn't there. And then you

1 have a workflow that's associated with filling
2 that gap. And that begins to initiate the
3 task. The task has, through a service
4 agreement, somebody you're going to assign it
5 to. So who's accountable for this. And it
6 also has an expected outcome.

7 So that ontologic approach would
8 allow you to see all of this in one fell
9 swoop. And I think that's the power of a
10 system that's modeled on meaning as opposed to
11 a system that's built on use.

12 So I apologize for this but I
13 think the formatting didn't come through here.
14 But the implementation actually, one of the
15 nice things about this model is you don't have
16 to throw the whole thing out in one fell swoop
17 either. You can develop this in a stepwise
18 way. So you can have a team of people that
19 can take the cues from the task list and begin
20 to model that. Nurses and doctors do this
21 today.

22 You can have them do a pick list

1 of, you know, these are the things that I want
2 to do in negotiation with the patient and so
3 on. So, I think the implementation can also
4 use existing resources like order sets and
5 CPOE and things like that as its first
6 iteration.

7 So my recommendations here are
8 that we have a medical ontology model that
9 allows us to link the tasks to all of the
10 related capabilities that we have, and that we
11 encourage the development in electronic
12 systems of modular components that can
13 interact with electronic health records in
14 other systems.

15 And one of the things that I
16 didn't talk too much about but I think is
17 pretty easy to see, the measure points that
18 you can get in that kind of a model of how
19 coordination occurs and how at the task level
20 we can begin to measure the competencies of
21 individual providers.

22 I did want to -- I missed one

1 point I wanted to emphasize which in the
2 middle column here you can see sort of the
3 checklist that people go through. And if you
4 have a high BMI, you know, there's some
5 choices there. Do you refer people to a
6 dietician? Does the patient take charge of
7 this and say I'm going to go to Weight
8 Watchers? And of course the other thing is
9 the targets that you want to have that are as
10 much as you can very clinically oriented. So
11 that you are really measuring the clinical
12 tasks.

13 So that's really all I wanted to
14 say at this point. Thank you.

15 DR. LARSEN: Well, those were both
16 great, kind of in the weeds and in the clouds
17 which I think most of us have to live in both
18 of those places a lot.

19 I don't know how many of you heard
20 that Amazon may soon start having same-day
21 delivery. And the question is how did Amazon
22 get to the point where they can do same-day

1 delivery when the mail system still takes a
2 week. And to my mind it's very related to
3 what Dave is talking about, is Amazon like
4 other big companies like Walmart have invested
5 in how to get visibility of their process and
6 understand all of the small micro components
7 of their process and then they continually
8 refine it. And they refine and they refine
9 and they refine.

10 There's not one magic silver
11 bullet that got Amazon to same-day delivery.
12 There was an investment in this kind of a
13 point of view and empowering people at every
14 level of the organization to look at their
15 data on an ongoing way and figuring out how
16 they constantly make stuff better. That's how
17 they get better than the Post Office and get
18 us to same-day delivery of things that you
19 order in the morning arrive at your house in
20 the afternoon through something that's like
21 the mail.

22 So I'm curious, Dave. How do we

1 leverage this to achieve the same things that
2 Walmart and Amazon have achieved?

3 DR. STUMPF: That's an excellent
4 question. And of course you know the way
5 Amazon does that is that they are very good at
6 this task management and delegating those
7 tasks. You know, that same-day delivery is
8 something that Federal Express or UPS or
9 somebody else is going to do and they're held
10 accountable to a standard. And you can
11 measure their competency at doing that and
12 pick the solutions that actually work.

13 So you know, the nice thing about
14 this is that it does kind of address another
15 issue that I think we all know has to happen
16 and that gets to sort of the top of your
17 competencies, who's going to do this task.
18 And doctors are doing a lot of unnecessary
19 things, nurses are doing a lot of work that's
20 way below their license. And what you want to
21 do is be able to elevate people's roles as
22 high as they can go in the system and use

1 them, all of their talents and still be able
2 to measure it. So I think this actually is a
3 very simple model.

4 The reaction that many people have
5 is this is too cookbook. And the way one gets
6 around that, you notice that little checkbox
7 that I put in the middle of how this works.
8 That's where experts are involved.

9 And there's two kinds of workflow
10 models out there that work. The one that
11 everybody knows about is, you know, you go
12 step A, step B, you branch, go to step C and
13 so on. And those are very cookbook and they
14 break all the time in healthcare.

15 The other model is one that van
16 der Aalst in the Netherlands proposed called
17 case-handling. And that methodology is driven
18 by data so that if you have data you can move
19 the workflow. And that's what this model
20 would support.

21 And a lot of the things that we
22 heard earlier about well, I want to be called

1 when the appointment's been made and all of
2 this stuff, that's really not what you want.
3 You want to know that you have a trusted
4 system like Kevin talked about, that airplane,
5 that it's only telling you when you're too
6 close to another plane and you need to dive.
7 It tells you exactly what to do.

8 And that's where -- this kind of a
9 system can be driven by data so we know we
10 have diabetes. The experts and the patient
11 said I want to do these tasks and those tasks
12 should run automatically until they run into
13 a snag, and then you have to ask the expert.
14 And that's what the van der Aalst methodology
15 really is. It works well in expert systems
16 and allows the data to drive things as
17 rapidly, as far as it can.

18 MS. NIELSEN: I actually have a
19 question for Dr. Goldblum. So, entering into
20 the world of Pioneer ACO. There's going to be
21 some data-sharing that's going to be required
22 throughout the organization. What kind of

1 technology are you using right now? What kind
2 of strategy do you have in place to be able to
3 get through some of these hurdles that we've
4 already discussed today as far as making sure
5 that your systems can talk to other systems?

6 DR. GOLDBLUM: Yes, that too is an
7 excellent question. I wouldn't even pretend
8 to say that we're beyond the very first step
9 in approaching an answer to that.

10 Where we've concentrated our
11 attention is kind of in two places. One is
12 making sure that everybody is on the same page
13 from a quality point of view. So it doesn't
14 matter if you're a specialist or a primary
15 care doctor, it doesn't matter if you're on
16 paper or using an EMR. You can look at our
17 population management tool and know how that
18 patient is doing. As Dave said, that's a
19 system that lies on top of all the different
20 EMRs and it keeps everybody on the same page
21 there.

22 The other thing that we have is we

1 have a care coordination tool that our nurses
2 use for care coordination. They gather data
3 from the hospital and from the patients and
4 then they distribute it out to the doctors.

5 So for example, one illustration
6 of that. If the patient has been in the
7 hospital they gather information from the
8 hospital, they talk to the patients, they
9 enter it into the care coordination tool and
10 then they push that out to the primary care
11 doctors in the office.

12 So as a primary care doctor
13 oftentimes the first that I know that a
14 patient has been in the hospital is when I get
15 information from the Renaissance nurse who has
16 gathered up information from both the patient
17 and the hospital and given it to me. And then
18 I can do what I have to do to make sure that
19 that patient gets in and that we follow up and
20 she has medications in there, et cetera.

21 So, the two places where we're
22 farthest along is on care coordination,

1 especially across care transitions and with
2 quality data as I showed.

3 DR. STUMPF: So I'd like to
4 respond a little bit too. Part of the NQF
5 coordination of care model is that you have a
6 single-source document which is this, you
7 know, longitudinal plan. And when you start
8 to get into it as a few places have, like I
9 think Oregon is down the road farthest on some
10 of this. The HIEs become very important at
11 that point because they're the only ones who
12 can collect data over a broad spectrum. So
13 when you delegate a task out to a community
14 resource of some sort it has to come back
15 through an HIE.

16 The question is, you know, where
17 is this patient-centered coordination plan,
18 longitudinal plan going to live? It could
19 live in a lot of places. It could live at an
20 HIE level. It could live in a practice where
21 you can access it, you know, anybody who needs
22 to on a need-to-know basis and pull out the

1 data that they want.

2 But you do have to I think have a
3 single-source document eventually that is
4 interoperable and why we need a standard like
5 IHE was starting to work on for what this is
6 going to actually look like. And we need a
7 standard framework for how tasks are going to
8 operate as well. And again, there's lots of
9 businesses that have done this very well but
10 we need to get it standardized in healthcare.

11 DR. LARSEN: I wonder if you might
12 comment a little bit, or anybody in the room
13 that has ideas about this. As I've been
14 thinking and talking to people about what can
15 some comprehensive measures of care
16 coordination be, one of the things that kind
17 of comes around and around again is this
18 person-centered care plan and how good we are
19 at achieving what we've promised or agreed to
20 do.

21 That would seem to have a lot of
22 validity with patients, it would seem to have

1 a lot of validity with purchasers and it would
2 seem to encourage the kinds of planning and
3 shared decision-making behaviors we want
4 without prescribing them to the infinite
5 detail.

6 We would allow the complexity of
7 that discussion and uniqueness of the patients
8 to be reflected, but what we would measure is
9 how good we did at executing against what we
10 promised. And if you have thoughts about how
11 we could cause that to happen both from an
12 infrastructure kind of meaningful use
13 standpoint and a measurement standpoint.

14 DR. STUMPF: I definitely have
15 some ideas about that. One of the things
16 first of all to point out, there's not a 1-to-
17 1 relationship between a diagnosis and a task
18 here because a task can kill more than one
19 bird so to speak. But you want to be able to
20 then delegate these things out and get the
21 feedback loop. But when you start talking
22 about how you're going to incentivize this,

1 you know, you're really talking about how you
2 can risk-adjust things because you want to get
3 resources in the right place.

4 And one of the incentives we have
5 in our current system is that you cherry-pick
6 the easy patients and dump the old ones. With
7 this kind of a system you're really, your
8 physicians and nurses and others, their
9 incentive is to document the complexity and to
10 actually go out and find the tough cases and
11 recruit them and get reimbursed in a way that
12 allows them to generate the resources that
13 they need to actually pull it off. And they
14 have to do it in a collaborative fashion
15 because they can't do it all by themselves.

16 DR. LARSEN: I think your idea is
17 an excellent one and I think that would be a
18 good measurement of the kind of care
19 coordination you've given and it would be very
20 patient-centered. But I'll be a naysayer for
21 just 5 seconds.

22 I've been administering a pay-for-

1 performance program for the last 12 years and
2 just deciding if a blood pressure is under
3 130/80 or if a glycohemoglobin is less than 7
4 or less than or equal to 7 or what happens if
5 you have 69.4 percent of your patients at goal
6 versus 69.6 percent of your patients at goal
7 when 70 percent is your target. So, a measure
8 like that is so far away from what we're doing
9 now in the quality world that it's going to
10 take a lot of steps to get there, not that we
11 shouldn't be working there. I think we
12 absolutely should. But even the easiest
13 measures we still struggle with and I'm sure
14 all of you could share 1,000 more stories of
15 trivial little things that you get hung up on
16 every day.

17 DR. STUMPF: Well, so let me make
18 a retort. I agree with you the way we are
19 today and one of my beefs with PQRS is that
20 it's this aggregate of, you know, 6 to 9, 12
21 months of data and then you may or may not get
22 a check. If you have this method and you have

1 -- and you have the tasks being reported out
2 on a regular basis. We actually piloted this
3 when I was at United. When you reach your
4 target you get a check the next week. And
5 this really puts things down to a very
6 granular level.

7 Now, you have to be very careful
8 about your targets. You know, are we looking
9 at one blood pressure within the target. Are
10 we looking for, you know, 10 of them
11 consistently over a period of time. But when
12 you define things that way and you then reward
13 people immediately that's what begins to
14 change behavior because you have this short
15 cycle. When you're at the task level you can
16 get at that.

17 The other thing that I just
18 casually mentioned is the ability to measure
19 the competencies of the people doing it. And
20 this is going to be important for maintenance
21 of licensure, maintenance of certification,
22 hospital credentialing, all sorts of things

1 that you get these secondary benefits that
2 motivate people. And so you're not just
3 measuring quality. That's one of my main
4 themes is that if we just focus on measurement
5 of quality we miss the boat on what really is
6 going to motivate people. Because they're not
7 that interested in report cards. They are,
8 but you know, there's more to it than that.

9 DR. LARSEN: We were one of the
10 test sites for the automated PQRS system back,
11 I don't know, 3 or 4 years ago actually. And
12 we built it all in our system and the data was
13 moving along. And 18 months later the finance
14 department got this check. And it took them
15 2 weeks to figure out what the money was from.
16 And it was from an 18 months in the past
17 automated submission to the PQRS system.

18 And so the feedback was so
19 disconnected, the financial feedback was so
20 disconnected from the measurement that we had
21 a really hard time figuring out had we done
22 anything right, had we done something wrong,

1 did we miss opportunities. We just didn't
2 know.

3 And so one of the things that I'm
4 completely in agreement with you is what we
5 have to figure out is how these feedbacks and
6 incentives are really meaningful to the people
7 doing the work and ideally right in the time
8 that they're doing it. That's not the way to
9 get my organization to change is 18 months
10 later give us a check that we can't figure out
11 where it came from.

12 So, and believe it or not there
13 are places that are starting to do this. I
14 had the luxury of meeting a CMIO at a hospital
15 in Ottawa who they recruited from industry.
16 And he was really big on this sort of lean
17 process control kind of organizations. And he
18 had done the sort of systems of realtime
19 delivery.

20 And they brought him in as a CIO
21 to a big health system. And what he started,
22 he had no previous healthcare experience. He

1 spent his first month just doing observations.
2 And he watched everybody interacting with the
3 health records. And he was horrified at how
4 much wasted energy they had going from device
5 to device to device.

6 So he developed a strategy that I
7 learned the name of from my niece's school a
8 couple of weeks ago. It's called the One
9 Person/One Device strategy. When her school
10 passed out an iPad to everybody they had a 1-
11 to-1 strategy. And my hospital wouldn't do a
12 1-to-1 strategy, that didn't make any sense,
13 but to this guy that was really focused on how
14 does he get the most efficient system he can
15 get a 1-to-1 strategy had a gigantic ROI and
16 completely changed the whole organizational
17 point of view and workflows they built because
18 they realized how much more effective they
19 were at getting these tasks accomplished and
20 how much less wasted motion and energy they
21 had from people having to go to fixed devices.
22 So this re-frames in many ways that whole

1 point of view about how we use our tools.

2 DR. STUMPF: Everything I've said
3 today, I would echo what you've said. There
4 are actually, there are people doing what I've
5 said. They're doing it in fragmented ways and
6 pieces of the puzzle, but this is doable. And
7 part of what you want to try to do with this
8 kind of thinking, and this may not be the
9 final thinking, but that you create this
10 overarching vision about where is it we're
11 going here and are we really looking for
12 something that can run on a single device.
13 And that has to be based I think on meaning of
14 data and not just these uses of data.

15 DR. GOLDBLUM: You know, you had a
16 problem, Kevin, that we wish we would have
17 had. We did all the same work that you did
18 and 18 months later we weren't wondering where
19 it came from but why it wasn't there.

20 (Laughter)

21 DR. GOLDBLUM: So if you want to
22 talk about motivation and de-motivation

1 there's an example of that.

2 But on a more positive note I
3 think one of the things that we've done at
4 Renaissance is we've made the rewards very
5 well-connected to the behaviors. And that's
6 how we've managed to get doctors interested in
7 quality improvement and population management.
8 I think we doctors are kind of notoriously
9 known for not wanting to change and not
10 wanting to be graded or judged. But we
11 gradually changed the culture in the way the
12 doctors think.

13 And I think that's almost as
14 important if not more important than the
15 actual development of the quality measures.
16 You need to have an effective measure that
17 people agree with is good care. But once you
18 have that you need to make sure that the
19 doctors have the motivation and the tools to
20 be able to respond to it. That's what we've
21 worked on with our population management tool
22 is giving them the tool. And then we've done

1 a lot of educational things to make sure that
2 we give them the cultural changes so that they
3 want to succeed in this rather than just
4 taking care of individual patients.

5 MS. NIELSEN: That actually raises
6 a really important point which is motivating
7 individuals to get the data into the system
8 which is the key. Because all of these
9 eMeasures are only going to be feasible if the
10 data is in the system.

11 And so could you talk a little bit
12 about that actual concept as far as what are
13 the things that you've been able to succeed to
14 not only assist with the data entry but have
15 there been challenges like fatigue alert that
16 you've had to deal with?

17 The reason I bring this up is
18 because I was hearing from one organization
19 that created some rules engines to go ahead
20 and to really focus on just some core
21 measures. And the core measures had to
22 unfortunately do with a lot of alerts that got

1 pushed out to the clinicians. And what ended
2 up happening is that instead of actually doing
3 a great job encouraging the data entry, the
4 opposite happened. So I'm just wondering if
5 you could speak to that.

6 DR. GOLDBLUM: Yes, fatigue alert
7 is a real problem. In fact, you're looking at
8 me and I have a terminal case of fatigue
9 alert. I am horrible with ignoring my EMRs
10 warnings. It slows me down and I'm
11 embarrassed to stand up here and admit this
12 but it's true. And it is a real-world
13 problem.

14 Our population management tool we
15 try to populate as much as we can without a
16 person having to do anything. So we have our
17 EMR do the upload of data and obviously work
18 has to be done to get things into the EMR in
19 the first place as I just spent 15 minutes
20 talking about. But once it's there thankfully
21 it can be uploaded.

22 We collect as much data as we

1 possibly can directly from laboratories. We
2 also collect it from claims as well. So our
3 manual data entry is kept to a minimum.

4 At the practice level with all the
5 workarounds we have there's still a lot of
6 work that has to be done in making sure the
7 data gets in there and it gets in there in the
8 right form. And again it's a matter of giving
9 people rewards and feedback on the job that
10 they're doing. I think it's like any other
11 employer/employee relationship, you know, you
12 have to tell people what their job is. You
13 have to give them feedback on how they're
14 doing it. They have to understand that it has
15 some meaning.

16 But one of the things that we've
17 been successful again at Renaissance in doing
18 is getting our offices -- and again, this is
19 part of PCMH as well -- but getting our
20 offices to work as teams. And it's not that
21 hard to get front staff people to work as
22 teams but it's hard to get doctors to work as

1 teams.

2 And one of the things that's
3 helped us is that this job is a large job and
4 doctors can't do it all by themselves. You
5 may be able to do it when you first get
6 started but as you move on when you're doing
7 good quality improvement and population
8 management it's a lot of work. So we've
9 encouraged delegation and sharing of work and
10 responsibilities. And everybody kind of feels
11 like they have a part and data collection and
12 getting it in there in an accurate way where
13 it can be searched is part of it.

14 DR. LARSEN: This is something I'm
15 actually pretty passionate about, surprise,
16 surprise.

17 Data gets better through use, it's
18 pretty well known. So the more that we have
19 data in constant feedback loops with lots of
20 people who need it and count on it and can see
21 it they'll get it better if you give them the
22 right tools and the ability to get it better

1 all the way through.

2 If you do whatever you're going to
3 do and then 3 months later you have some data
4 geek scrub it all and normalize it and never
5 give any feedback loops back to your home
6 system nothing's going to get better. You're
7 just going to keep creating garbage and
8 someone at the back end you're going to pay a
9 lot of money to to try to make some better
10 sense of it.

11 So you have to find all these
12 micro feedback loops at the front end and that
13 align people's motivation that if they do it
14 right the first time when the patient comes
15 back the second time it's better. And when
16 everybody else is doing it it gets better and
17 the whole thing becomes a positive feedback
18 loop of goodness. Of virtue.

19 And then the decision support
20 world actually has a really nice literature
21 that is not very well leveraged. There are
22 some best practices around decision support

1 and most of us treat decision support alerts
2 with the receiver operating curve. They have
3 a false positive rate, a false negative rate
4 and then they have an intervention, how
5 effective were they as an intervention.

6 And you can actually do randomized
7 trials on decision support where you randomize
8 people to get an alert or don't get an alert
9 and you can see if it changed behavior. And
10 so the best places do that and they only
11 actually use alerts that change behavior.
12 Because if they don't change behavior no
13 matter how smart you think you are for
14 creating something cool that will really work
15 it didn't, so get rid of it. It didn't work,
16 it was a tool that wasn't effective, you
17 proved it in your little tiny, randomized
18 trial. Out.

19 You also have to constantly
20 monitor them because they break, and they
21 break for a few reasons. They break because
22 people fatigue of them. So the popup ad you

1 got on your Gmail page you responded to the
2 first couple of times but you get immune to
3 it. It's the same way with these kind of
4 alerts in our systems.

5 But also the underlying
6 architecture of the alerts breaks because the
7 NDC codes change and all sorts of other things
8 change in the system. So, most of the problem
9 at least in my mind with alert fatigue isn't
10 about the providers, it's about the systems
11 and the alerts.

12 And we have to really re-frame our
13 thinking that we want people to be part of
14 this virtuous cycle of having motivations to
15 get the data right and having systems that
16 support them getting the data right and not
17 forcing them with things that we think are
18 good forcing functions because the forcing
19 functions typically prove to not work.

20 DR. STUMPF: So I'd like to pick
21 up on that because I agree with it. Part of
22 the problem and one of the barriers to

1 implementing all of this stuff is the need for
2 a lot more professional curation of data
3 assets.

4 And you know, I remember, I see
5 them at the back of the room. The PCPI and
6 their work with Cardio-HIT in the early days
7 showed, you know, a lot of the problems that
8 existed with the data that was going into an
9 EHR and couldn't -- or wasn't going in really,
10 and how do you get that standardized.

11 So, it's really apparent that
12 right now a lot of the frustration with
13 electronic environments is we have to
14 customize everything. But the customization
15 is usually based on specific use cases. And
16 the way you're going to get curated material
17 I think is through professional societies
18 because the only way that you can do this is
19 with professionals. So it's got to be nursing
20 professionals and pharmacists and physicians
21 who are curating.

22 And we do this with -- eMeasure is

1 a good example of a curated system. It's just
2 very cumbersome right now and it's also too
3 narrowly focused because at the same time
4 we're doing the eMeasure we ought to be
5 thinking about the data templates that need to
6 plug into the EHR. And we ought to be
7 thinking about what workflow is going to be
8 activated that's going to resolve that gap in
9 care.

10 So when you think about this
11 overarching framework you can begin at the
12 time you're developing the rule is if that's
13 where you're coming from you can also develop
14 the other components that are necessary for
15 it.

16 Now, there's other people are
17 going to come at it from another angle, but
18 they need to be able to consider well, I've
19 got to have rules to do this.

20 DR. LARSEN: We'll open it up to
21 some audience questions.

22 DR. PALEN: This really resonates

1 with me, this architectural plan. And within
2 Kaiser in Colorado we have, as you can
3 imagine, population management tools and
4 disease state management tools. And we have
5 this thing called gap report. And Samer
6 showed one of those gap reports on the slide
7 presentation he did earlier, you know, what
8 was the regional average, where's our goal,
9 and how are you doing.

10 And what we've found in being able
11 to do these gap reports is that there's still
12 a lot of manual effort. I mean, we have data
13 sources from, as you can imagine, from a lot
14 of places, even external data sources.

15 Kaiser in Colorado does not own
16 our own hospitals. Some of you may be
17 familiar about Kaisers in California, they own
18 everything. But in Colorado we contract with
19 several hospital systems. So we have to get
20 data feeds from them. I mean, we don't own
21 their EMR stuff so we have to get data feeds
22 from them. Even with all those data feeds

1 coming in, and I look at your center slide
2 there and all those arrows, the impact on all
3 those arrows. Well, those feed our disease
4 state management programs to produce the gap
5 reports.

6 An example is diabetes. So, we
7 can develop a super set of patients that are
8 diabetics but guess what. When you actually
9 have manual effort and have a clinical eye,
10 well, 20 percent of them really aren't
11 diabetics. And so then when you start having
12 these patient-centered coordination plan you
13 better make sure that you're coordinating with
14 somebody that really is a diabetic and not
15 some spurious result.

16 So that's a huge challenge of
17 being able to find out, okay, well the system,
18 going back to your airplane thing, well we're
19 going down. Well, are we really going down?
20 Is that really a diabetic or not? It's that
21 validation of that data that's so important.

22 DR. STUMPF: You need the

1 clinician in there right at the beginning when
2 you start to go from the data to a task
3 implementation. Without the clinician in
4 there it fails.

5 DR. LARSEN: So a funny story
6 about my old hospital. I hired a medical
7 director of documentation quality and her
8 whole job is to make sure that she has her
9 eyes on every place where documentation needs
10 to happen, and it needs to be good and
11 reliable and accurate, and has a sort of
12 single strategy and framework.

13 And she worked a lot with our HIM
14 department and a very good working
15 relationship. She got to this point where she
16 realized she thinks clinicians should be
17 reviewing the DRG codes that leave the
18 organization. And that was hugely threatening
19 to our coders because the coders had a very
20 strong professional point of view that they
21 had their own way of assigning these
22 diagnoses. And she as a physician was sort of

1 shocked that it would be such a threat that
2 there would be a clinical secondary review of
3 coders' codes. And it was a sort of cultural
4 thing we had to figure out within the
5 organization.

6 And I think we still work in all
7 of these silos, these professional silos. And
8 some of the reason our data is wrong is not
9 because it's wrong, it's because it's created
10 for a different reason and a different point
11 of view and we haven't normalized our thoughts
12 and we haven't figured out well, this is the
13 coder definition of diabetes and that can live
14 as its own thing. This is what the clinicians
15 think diabetes is and that will live as its
16 own thing. So we have to figure out how to
17 work together and all play in the same data.

18 MS. NIELSEN: And from an
19 eMeasures standpoint though the question is
20 where are we going to get the data and which
21 definition is the one we use. Is it the
22 coders' definition of diabetes or is it the

1 clinicians' definition of diabetes which is a
2 real important fact that we have to look at.

3 DR. STUMPF: I want to speak about
4 the issue of what -- NQF called them
5 collaborators in the healthcare system as
6 opposed to consultants and other people. The
7 idea is you're creating a team here.

8 And it's not quite clear there
9 what a service agreement is but it has two
10 major objectives. One of them is to get
11 access to care so that you, when you break
12 your arm you don't end up in the ED, you end
13 up in either an orthopedist's office or in a
14 primary care office that knows how to deal
15 with a fractured arm.

16 The other major function of it is
17 getting the appropriate care. So if you're
18 referred to an orthopedist you don't get an
19 operation the first few weeks.

20 Now what happened, and this was
21 not something we pulled out of the air. It
22 was something we looked where best practices

1 were and those happened to be in New England.
2 And the dynamics between providers changes
3 with that kind of an environment. So you can
4 imagine an orthopedist who's going to get a
5 certain amount of money for every fractured
6 forearm.

7 Their incentive now is to teach
8 their primary care doctors how to set a
9 fracture which many of them don't know how to
10 do, and maybe even to make their cast guy
11 available to put it on. But they don't
12 actually have to see the patient. And what
13 you saw was a lot more collaboration occurring
14 between these providers without actually
15 seeing the patient. You know, if you have a
16 tough one just give me a call.

17 Nowadays you can't get reimbursed
18 if you're an orthopedist and you're taking a
19 phone call. You've got to have the patient in
20 your office. And that's one of the
21 shortcomings and what the service agreements
22 can begin to address, that we're going to

1 reimburse you for helping us coordinate this
2 care.

3 MS. TAYLOR: Hi, I'm Lisa Taylor
4 from the American Health Information
5 Management Association. And I'm -- after
6 those last comments about coding I think I
7 need to go run and sit down.

8 (Laughter)

9 MS. TAYLOR: But I'm not up here
10 to address coding. I wanted to thank you for
11 your query framework that you showed, the
12 ontological query framework because it
13 crystallized a thought that I have been
14 formulating listening to people from different
15 sectors in the healthcare industry today.

16 Health information management
17 started as medical records in 1928 because
18 criteria needed to be set for the medical
19 record. And I think we have some lessons to
20 learn from the historical development which is
21 criteria were set. Authoritative bodies said
22 this has to happen. Facilities developed

1 their own way of doing things until a criteria
2 that was required by an authoritative body
3 said no, you need to do it this way.

4 So right now we're in this turn
5 things upside down. I am not in IT but
6 everybody tells me in IT you do not just
7 automate the system the way it is, you've got
8 to look at what you're doing. And you are not
9 going to have just a workflow that follows the
10 way it used to because then you don't harness
11 the power of the computerization. So, I think
12 your ontological query showed that very
13 clearly.

14 And one of the things that I have
15 noticed in our discussions today is there's
16 been a lot of discussion about who does what.
17 Who's responsible for what data. Who's
18 accountable for what actions. That
19 ontological framework showed that clearly.

20 And we need to realize that we are
21 going to have to readdress the information
22 governance and the data governance of EHRs.

1 And that's what we're struggling with here
2 today. Who's going to do what, who's
3 accountable for what. Thank you. And we can
4 talk about coding another day.

5 DR. STUMPF: Coding is very
6 important. One of the accountable entities,
7 by the way, here is an electronic system. I
8 don't think I mentioned that. But you know,
9 they have trigger events and you have to hold
10 them accountable for the alerts or the bad
11 alerts or the good alerts and other things.
12 So they have an accountability here as well.

13 DR. LARSEN: Your point is very
14 well taken. And I think one of the things
15 that we don't recognize in the eMeasure world
16 enough is that coding is very consistent
17 because we have good processes to make sure
18 that it is. Our coders were really well
19 trained and they had a very clear point of
20 view. They did inter-rater reliability
21 checking, they did double-checking. The
22 consistency of coded diagnoses is way more

1 consistent coder to coder than clinicians.

2 So, clinical studies -- I used to
3 teach about chest pain. Clinical studies,
4 when you bring doctors the same cases doctors
5 have horrible inter-rater reliability about
6 what their definition is of disease or naming
7 of disease. And so part of the variance in
8 the eMeasures is not just about variance in
9 the systems and the data, it's variance in
10 doctors' point of view about what they call
11 something. And we have not done the same work
12 with doctors to achieve inter-rater
13 reliability as we've done with coders to
14 achieve inter-rater reliability.

15 And so we're dealing with a
16 fundamentally different kind of information.
17 And the question is do we cause there to be
18 less inter-rater -- to be greater inter-rater
19 reliability with doctors, or do we live with
20 this sort of landscape of more variance and
21 figure out how to measure more variance
22 because we've got more sophisticated tools.

1 I'm actually in the second camp.
2 I don't think we should over-prescribe the
3 sort of variability there is, but we need to
4 leverage 21st century analysis to be able to
5 provide visibility into what that looks like
6 so we can provide it as feedback back to those
7 providers and say hey, Dr. Smith, do you know
8 that you have only 30 percent concordance with
9 the rest of your group in how you diagnose
10 Grave's disease. Well, that's really
11 interesting feedback for Dr. Smith and that
12 would be a new way to start to normalize
13 healthcare but it's a more -- it's a way
14 that's kind of socially acceptable for most of
15 the professionals that are there. It becomes
16 professional development.

17 DR. GOLDBLUM: Doctors are trained
18 to take action so I can just hear somebody
19 saying in response to what you just said,
20 Kevin, well you can call it whatever you want,
21 but you know, here's what we have to do for
22 this particular patient. So it's really a

1 matter of changing the professional's minds.
2 And I agree with what you said, I think you're
3 probably going to find another way around it
4 than getting doctors to agree on what they
5 call different things.

6 DR. BURSTIN: Hi, I'm Helen
7 Burstin. I'm the senior vice president for
8 performance measures here at NQF.

9 I'm having a little bit of measure
10 development deja-vu back to the old days. So,
11 I guess we had this thought that we would move
12 towards EHRs and some of these issues around
13 data quality would be diminished.

14 And I think what we're hearing
15 here is there probably needs to be a clear set
16 of checks and balances in EHRs just as much as
17 there were when we built claims-based
18 measures. I mean, there's a reason some of
19 those claims-based measures had at least two
20 visits in a given year, or perhaps also a
21 medication for that given condition on a
22 medication list.

1 So I'm actually not comfortable
2 with the idea that we need to train docs and
3 other clinicians to better code their
4 problems. I think we have to actually use the
5 technology and think through what are the
6 right set of checks and balances using the
7 data that's coded and structured or perhaps,
8 you know, NLP to actually see where's actually
9 truly a diagnoses there.

10 But at the end of the day there
11 needs to be some hierarchy we expect of what
12 the data quality is. So if you're pulling the
13 diagnosis from coded problems from a visit
14 that the clinician didn't personally say this
15 was the visit today then I have less
16 confidence. If I at least in my old EHR saw
17 a patient with diabetes I was then triggered
18 to say in addition to the billing code is this
19 a problem you want to put on your problem
20 list.

21 So I think there's got to be
22 something really thoughtful about the way the

1 data quality is expected even from EHRs. And
2 I think there's a lot of work to be done.

3 MS. NIELSEN: Absolutely. And if
4 I could just tag onto that. You know, when we
5 start looking at some of the technology moving
6 forward, right, whether it's IBM's Watson or
7 some of the natural language processing
8 technology that's out there we have a decision
9 to make overall. It gets back to variance.
10 How much variance are we going to accept?

11 So a computer isn't perfect. We
12 have to tell the computer what to do, right?
13 And so -- in fact, can I just give you a great
14 analogy? It's used a lot. But if you were to
15 write down the instructions of how to make a
16 peanut butter and jelly sandwich I bet you
17 that you would leave off some pretty key steps
18 if you were going to go ahead and turn that
19 into code to have the computer make the same
20 peanut butter and jelly sandwich.

21 For instance, you can't just say
22 put the peanut butter on the bread. The

1 computer is going to put the jar of peanut
2 butter on the piece of bread. Oh, wait a
3 second, is that a slice of bread or is that
4 the loaf of bread, right? And so these are
5 the nuances that we have to train or teach the
6 computer to look for. But in natural language
7 processing we're going to have to make a
8 decision here. It can be done. A lot of this
9 extra stuff can be done. You, computer, go
10 find it.

11 Now, the question then becomes we
12 can build a user interface so that you have a
13 person at the computer saying okay, yes
14 computer, you were correct, or no, you
15 weren't. Now that's additional resources,
16 that's additional time but that reduces
17 variance; that improves data quality.

18 Or do we want to say you know,
19 let's just let the computer do that. We're
20 going to live with a certain amount of
21 variance. But will it reduce some of our
22 overall resource constraints that is getting

1 to be more and more of an issue?

2 Because let's face it, every piece
3 of data has a cost associated with it. There
4 is a cost associated with every single data
5 element. And some data elements are a lot
6 cheaper than others. And so we in a way here
7 are also talking about the overall cost of
8 healthcare, right? Because if we go ahead and
9 start thinking about how much it's going to
10 cost for all of those data elements to be
11 captured with different variances of cost,
12 right, then we can go ahead and look and say
13 okay, is the cost of that measure with all
14 those data elements, is that the cost we want
15 to put forward for that data and is that the
16 right thing to do.

17 DR. LARSEN: I agree although what
18 I would say is look at Walmart. So, Walmart
19 is one of the biggest consumers of data in the
20 entire world. They also have one of the
21 lowest costs per unit volume or unit of
22 delivery you can imagine. So there's a way

1 between those two things where you get lots of
2 data but you figure out how you leverage your
3 low-cost data in consistent, reliable ways and
4 you can then actually really drive efficiency.

5 MS. NIELSEN: Exactly, and that's
6 just it. Looking at how do we leverage the
7 data that's there strategically without
8 compromising the quality. I think we're
9 talking -- go ahead.

10 DR. STUMPF: I'd like to echo one
11 of Helen's points though. I think one of the
12 things you were enunciating which I agree with
13 is that we have to be able to hold the EHRs
14 accountable for doing certain things. And
15 that's why the whole QDM was developed
16 originally in that utilization framework so
17 that we can actually see what they're doing
18 and get better audit logs and better
19 understanding of the triggers for where the
20 decisions are going.

21 And the analogy I like to use is
22 you can't sell a car in Illinois where I live

1 if it doesn't have taillights. And you know,
2 there's certain things that an EHR has to
3 have. And you know, certification is not
4 enough. To just say that you can deliver a
5 one-time CCD message doesn't tell you that it
6 can process a certain workflow and that we can
7 measure that workflow and figure out what it
8 actually did.

9 MS. SPIRO: Yes, Shelly Spiro from
10 the Pharmacy HIT Collaborative.

11 One of the things I haven't heard
12 today that I'd like to hear more from the
13 panel on is really harmonization of the
14 eMeasures or the quality measures across
15 different practice settings. Whether it's
16 long-term post-acute care, whether it's
17 pharmacy, whether it's lab, how do we actually
18 come up with common types of eMeasures that
19 really are more patient-focused? Because what
20 I'm collecting out of my pharmacist EHR might
21 be different than what you're collecting out
22 of an EHR in a hospital.

1 And what -- and I guess to Kevin
2 too, what is CMS doing? Because most of us
3 are being driven by the regulatory
4 requirements of the larger payers. So can you
5 talk about that harmonization of some of the
6 measures?

7 DR. LARSEN: Sure.

8 DR. STUMPF: Can I just make one
9 comment?

10 DR. LARSEN: Go ahead, yes.

11 DR. STUMPF: One of the comments
12 that was made earlier really hit me and that
13 is if you have, you know, you're an internist
14 and you're responsible for the blood pressure.
15 You know, that when we have those kind of
16 tasks of managing blood pressure everybody in
17 the system ought to be accountable for that to
18 some extent. And I think that's what you're
19 getting at.

20 So that when you're in a retail
21 clinic at a pharmacy they're taking a blood
22 pressure. That needs to get in the system.

1 When you go see your specialist they take a
2 blood pressure. And that all gets back to the
3 internist who's managing that. They're
4 accountable for it but they have a team of
5 people who are feeding data.

6 And I think that's what you're
7 driving at. It begins to get a much broader
8 constituency focused on these goals even
9 though they're not the actual accountable one.
10 And then you as a pharmacist, you have certain
11 responsibilities about medication adherence
12 but you can't do it without the doctor and
13 without the other people who are, you know,
14 engaged.

15 MS. SPIRO: But the goals have to
16 be focused on the patient.

17 DR. STUMPF: Yes, that's right.

18 DR. LARSEN: So I'll channel my
19 colleagues at CMS who articulate this I think
20 the best. So Patrick Conway and Kate Goodrich
21 and others at OCSQ, some of whom are in the
22 back of the room.

1 The National Quality Strategy was
2 actually created to give an overarching
3 framework for how we can start to align all of
4 the quality initiatives not just of the
5 government but of the country, and not just
6 the measurement initiatives but also the other
7 kinds of investment in initiatives. It really
8 helps us frame the meaningful use program, for
9 example. So that has created a certain set of
10 tasks that we are now engaged upon as HHS.

11 Some of those tasks are actually
12 trying to align programs. So we know that if
13 programs can be aligned that really helps. So
14 if you read the proposed rule for PQRS and Kim
15 Schwartz is here from the PQRS program, that
16 proposed rule suggests that it would align to
17 the meaningful use eligible provider program.

18 And I've heard Patrick Conway
19 articulate a goal of measure once so that
20 measurement would happen one time across
21 public and private and other kind of
22 contracted payers and that one-time

1 measurement could then have a way to be used
2 across all those places.

3 We also at HHS are in the process
4 of cataloging by kind of category and
5 condition all the measures across all the HHS
6 agencies. And then I sit on a council where
7 we prioritize and choose the focused core of
8 those that we are going to really use and then
9 figure out which ones we can retire across the
10 Agency.

11 We then think about those measures
12 in a sort of context and the slide that we use
13 is a kind of slide of boxes that sit on top of
14 each other. And so the measures are related
15 but may not be exactly the same. They have a
16 sort of roll-up/drill-down process. So
17 they'll drill down to the provider, up to the
18 group or ACO and then up to the community.
19 And ideally we want the same measure to be
20 measured across.

21 And I think a really interesting
22 example, and when I was talking to one of my

1 colleagues who leads a large HIV program,
2 they're now starting to measure viral load of
3 a community. What an interesting thought that
4 now they're not just measuring who's in your
5 practice but in your city what is the viral
6 load.

7 And so that relates to what your
8 practice is and that relates to what your
9 group is but it also relates to a public
10 health goal and it helps to make those things
11 all get aligned. So we are absolutely working
12 in those directions and we need your help.

13 DR. STUMPF: Yes, that's an
14 excellent point. I mean, I, as a neurologist
15 there's some things that come in epidemics,
16 you know, like Bell's palsy. You see 1, you
17 know you're going to see 10 of them. And to
18 be able to have that, you know, recognize that
19 very early on really helps you with clinical
20 management. You're not running around doing
21 a lot of irrelevant things when you know
22 there's Bell's palsy or Sydenham's chorea is

1 another example of things that come in spurts.
2 So, that was the first thing I usually do when
3 I first started seeing Bell's palsy that I'd
4 call up a couple of colleagues and say have
5 you been seeing this. And it's much easier to
6 manage those problems if you have those public
7 health tracking systems in place.

8 MS. NIELSEN: Yes, there's
9 actually an initiative and several individuals
10 over at Hopkins, Johns Hopkins is actually
11 involved in looking at all of these different
12 public health data sets. And how do we look
13 at making them meaningful at the point of
14 care. So there's a lot of exciting energy
15 going on about that.

16 And just kind of a follow-up.
17 Kate Goodrich was at the very first eMeasure
18 Learning Collaborative meeting here in April
19 and she did a really nice job talking about
20 where CMS is going as far as harmonization.
21 And I believe that is archived on the NQF
22 website. So you could actually go and not

1 only get her slides but you can also listen to
2 her presentation from April.

3 DR. LARSEN: We're getting the
4 timeout signal from the back of the room. So
5 I thank you all very much. Thank our
6 panelists.

7 (Applause)

8 MS. FRANKLIN: So we'll take a 15-
9 minute break, maybe a 14-minute break. If you
10 could be back at 25 of and we will -- we have
11 one more very short panel and then we're going
12 to do a wrap-up and have you out of here by
13 3:30. Thanks.

14 (Whereupon, the above-entitled
15 matter went off the record at 2:21 p.m. and
16 resumed at 2:37 p.m.)

17 MS. FRANKLIN: So we're going to
18 go ahead and start the last session or the
19 last segment of our day. So, if everyone
20 could have a seat.

21 So the last part of our meeting
22 today, we're going to do about a 15-minute

1 panel and have a couple of measure developers
2 talk about the measure development process.
3 We think that will be somewhat hopefully
4 enlightening. And Dr. Butt is going to
5 moderate this. As I said about 15 minutes and
6 then we're going to do a closing session with
7 some remarks and some next steps. And then
8 we'll let you go.

9 DR. BUTT: Okay, so this session
10 is actually a panel and we are very fortunate
11 to have a couple of the measure developers
12 join us. And Sharon Hibay is going to
13 introduce herself and has a brief
14 presentation. And Ann Watt is from the Joint
15 Commission. She's going to join her.

16 And after their -- but then the
17 idea is that after the measure developer
18 presentation for 15 minutes we will ask some
19 of the other panel members to come up here.
20 Those who can find chairs can sit here. I'll
21 actually, I can probably stand, and then
22 others if they want to join us up front here

1 that would be fine too. But I have a few
2 slides that I think would be good to sort of
3 try to do a wrap-up session and hopefully be
4 done by 3:30 so those who have to catch
5 planes, trains or buses can be on their way.

6 With that said is this yours?

7 Okay, take it away.

8 MS. HIBAY: Good afternoon,
9 everyone. Can you hear me okay? Okay, I see
10 nodding in the back.

11 My name is Sharon Hibay. I work
12 with Quality Insights of Pennsylvania. We are
13 contracted with CMS to develop select measures
14 for the Physician Quality Reporting System and
15 they are utilized amongst numerous other CMS
16 programs -- measure programs.

17 What I'm going to do is just kind
18 of do a couple of things which is talk a
19 little bit about what is measure development,
20 how is QIP, Quality Insights in this eMeasure
21 development world, and then talk a little bit
22 more about so what is eMeasure development as

1 opposed to just measure development itself.

2 In 2006 Quality Insights began our
3 journey of doing measure development with what
4 was going to be some sort of ambulatory
5 voluntary quality measure reporting program
6 that eventually became PQRI and then now PQRS.
7 We have developed up to 35 clinical quality
8 measures for various different programs
9 including one which was in Meaningful Use 1,
10 our BMI measure. And we have six measures for
11 Meaningful Use 2.

12 A little bit about where we are in
13 this eMeasure space as an organization. Again
14 we are contracted to develop measures for PQRS
15 and so once we started getting into this
16 eMeasure world some of the measures that we
17 had already worked on and were -- had
18 developed and were maintaining for PQRS in the
19 claims and registry reporting options. We
20 just moved over into that eMeasure development
21 space. We have developed and tested a number
22 of measures as I've said.

1 We are part of the eMIG group
2 which is a group of ONC, NQF, CMS, a bunch of
3 different measure developers. I think Ann,
4 you sit on eMIG with me also. Lots of great
5 contractors. And we all kind of look at this
6 process and say where are we with the QDM, the
7 measure authoring tool. And we utilize -- I
8 have in quotes from our perspective some work
9 with the blueprint which is HHS's guideline to
10 how we develop measures for HHS measure
11 reporting. I think we kind of set some
12 standardization and policy work there.

13 I think it's a group that I would
14 say is at least 100 feet up although sometimes
15 we do go down into the weeds a bit. I think
16 one of the most fun conversations we had on
17 eMIG was about a 45-minute long discussion of
18 the word "during" and how you can define the
19 word "during" and how many different and
20 special ways, so special, that word can be
21 defined.

22 Once you recognize the minutiae

1 that is what is eMeasure development. I have
2 somebody who works for my team who asked me
3 once when do we get out of the weeds, Sharon.
4 And I said -- with this eMeasure development
5 stuff. And it was a bit prophetic. I said
6 well, when you don't work in this job anymore.

7 (Laughter)

8 MS. HIBAY: It gets worse. She
9 left 3 months later.

10 (Laughter)

11 MS. HIBAY: Sorry, sorry. So it's
12 a very interesting role we do and I think
13 eMIG's a really great example.

14 We live this bimodal role with
15 CMS. We do the measure development but then
16 we also do program support. So I often tell
17 people who are trying to sign onto my team
18 well you know, you have to be able to do what
19 I affectionately call the commando crawl. You
20 know, you've got to love the weeds. You can't
21 just go to touch the weeds, you have to be one
22 with the weeds, okay?

1 And then from there, you know,
2 you've got to be able to jump back up. And
3 you have to understand how the weeds are
4 interconnected. And not just connected to the
5 eMeasure world but then you've got to be able
6 to step back to that clinical world of where
7 are you getting the source information from
8 your clinical practice guidelines, all your
9 evidence, all that really good stuff. But
10 then understand -- and so, oh by the way,
11 what's it like in the real world and what does
12 this mean to the whatever setting and
13 providers and all of that stuff where this
14 measure would be utilized. So okay, so that's
15 my little happy thing on eMIG.

16 We are part of -- I've been part
17 of the eMeasure Learning Collaborative and I
18 thank everyone for allowing me to participate
19 with that. This has been a really exciting
20 opportunity.

21 We have done some work, lots of
22 work with the measure authoring tool. And for

1 awhile we were doing weekly meetings just on
2 so what is this logic, what are your examples,
3 how are you developing. That's been really,
4 really great because we had an opportunity to
5 work with other measure developers and kind of
6 collaborate.

7 We did some NLM and Mitre value
8 set and logic reviews. That's still going on.
9 I think -- cross your fingers for me. I think
10 it was done a couple of days ago. I'm not
11 totally certain though.

12 And let's see, lots and lots and
13 lots of value set training. As an
14 organization we really stepped into the SNOMED
15 world kind of right up front. So we did some
16 real intensive training with that. We jumped
17 onboard with ICD-10 and had our measures done
18 pretty quick I think. I'll give kudos to Kim
19 Schwartz because she really pushed PQRS to be
20 really a forerunner in the ICD-10 conversion,
21 LOINC, RxNorm, HL7, yada yada.

22 We also put forward some new

1 concepts with NLM with SNOMED and such for our
2 measures. Because you know, you're really
3 looking when you're developing an eMeasure,
4 you really need to know down to such level of
5 specificity and detail whether or not some
6 sort of clinical concept is within an EHR,
7 reportable within an EHR. And sometimes it's
8 not so sometimes you have to, you know, apply
9 for new ones. And we did a pretty good job
10 with that.

11 We've met with wonderful
12 professionals and actually some in the room
13 here today. And also some vendors, again,
14 some in the room today with our eMeasure
15 testing. And we also are very extensively
16 involved in our organization with the Regional
17 Extension Center work which allows us to
18 really understand meaningful use, attested EHR
19 providers, all that good stuff, so we can
20 understand what it's really like out there in
21 kind of the real world. And then we did alpha
22 and beta testing. That was fun. Okay.

1 So just in general this is the
2 measure development. So not even living in
3 the land of the e-world yet. This is the
4 measure development process.

5 So first you start off with some
6 sort of a gap analysis. And that could be
7 based on a clinical gap or a measures gap.
8 And you do some sort of clinical quality
9 measure identification and selection up front.

10 You'll -- also, some of this stuff
11 kind of goes in tandem. You're also going to
12 be looking at an environmental scan literature
13 review. You're looking for where are we in
14 the world with what is the most clinically
15 relevant and current information based upon
16 setting, based upon provider. You're looking
17 for importance. All those good things that
18 you look for with your NQF endorsement. We
19 kind of like seek all that information right
20 up front, benchmarking performance, all of
21 that.

22 You're also convening a technical

1 expert panel of people who want to talk about
2 this and help us develop a measure and again
3 understand what it's like in the real world.
4 So again that relevance, clinical currency.

5 You have to develop a
6 specification. So you've got your title,
7 description, denominator, numerator,
8 exclusion, exception. That whole space about
9 exceptions is new over the last year. We've
10 really kind of teased out the difference
11 between an exclusion and exception. I think
12 it took everyone in this process a good 2-3
13 months to really absorb the difference there.

14 And again, alpha testing is really
15 kind of -- I'll talk a little bit more about
16 that. You know, are data elements available
17 or is the concept available, are coding things
18 available for you. You have to be involved
19 with getting your public and stakeholders to
20 give input on what you're developing. You
21 can't develop it in a silo. You really want
22 to hear comments about what's going on.

1 If you choose your measures go
2 into a call for measures process and then if
3 they are selected they will go through a
4 program implementation. And then you'll go
5 through some reliability beta testing and that
6 also includes validity testing. And then you
7 walk through that very easy and very quick
8 process of NQF endorsement.

9 (Laughter)

10 MS. HIBAY: Heidi, if you're here.
11 So, okay.

12 So just in general this is not my
13 last piece of data. I actually heard this I
14 believe at one of the NQF webinars. So I just
15 want to put that out for public consumption
16 there. It takes an average -- this part I do
17 know -- of 2 to 3 years from measure concept
18 to getting it into implementation and
19 endorsement, okay? And it costs about
20 \$125,000, \$150,000 per measure to develop.

21 We have to be really selective
22 about those measures we choose to want to put

1 into the measure inventory. That's why
2 wonderful things such as National Quality
3 Strategy and all of these other harmonization
4 gap analyses that are out there right now can
5 help drive where do we want to most
6 effectively develop measures.

7 The next piece and I'll try to now
8 sneak over a little bit more now into the
9 eMeasure development. So the de novo versus
10 the retooled clinical quality measures.

11 So that whole wonderful process we
12 just talked about for de novo measures, you
13 still have to do that. And then now you have
14 to kind of convert that over into how is this
15 measure going to be reportable through an EHR.
16 So you're going to start with that measure
17 development cycle I just spoke about.

18 You have to develop some sort of
19 conceptual framework or calculation algorithm.
20 I think we would do that with both measure
21 sets. And you have to develop some sort of
22 measure logic.

1 This process, we all became in the
2 last I'd say 6-8 months excessively familiar
3 with what is the measure authoring tool. We
4 were building a product and building measures
5 at the same time. So we were baiting this
6 process as we were developing measures.

7 I think this is not unheard of to
8 say this. In the beginning of the process we
9 were doing this in a bunch of little silos and
10 really wanted the silos busted down so we
11 could all kind of learn collectively.
12 Probably the second half of this process we
13 got a little bit better at that. And then my
14 own editorial on that is I think that our
15 collective learning -- I'm looking for Kendra
16 to give me a bobble-head nod yes -- I think
17 our collective learning, just our learning
18 process in general became much better.

19 Again, that funny that hat we
20 wear, that bimodal hat of developing measures
21 and program support. Someone would ask a
22 question on a call about a measure and I would

1 say oh, first of all, the thing was like oh
2 God, don't let it be my measure. That was the
3 first thing.

4 (Laughter)

5 MS. HIBAY: The second thing was
6 okay, but does that pertain to my measure.
7 Okay, and does that pertain to any of my other
8 measures. And what does it mean to the
9 program in general. And do we need to ask
10 questions. And you know, always trying to get
11 my team to always kind of take a step back and
12 say yes, if it's not one of our six measures
13 we still have an obligation to the program to
14 say how is it we can continue to build this
15 process and collectively share information
16 amongst people.

17 And I think we all as a group in
18 general -- we all got so much better at this
19 process in the last I'd say 2 months
20 specifically. There was lots of coding and
21 value set development. I heard someone say
22 this morning there was the difference between

1 transitional and the standard set. So you
2 know, HIT Standards Committee asked us to
3 really say these are going to be our standard
4 sets moving forward. You know, that's the
5 SNOMED and the LOINC and RxNorm, all that
6 happy stuff.

7 But you know, that's not where we
8 are right now. So if we want those measures
9 to be developed and utilized now we have to
10 also include the CPTs, the ICD-9, the ICD-10,
11 all of those pieces, the HCPCS. And so you
12 almost had to develop two different measures
13 and make sure that hopefully you had value
14 sets in both worlds. And then we had to do
15 alpha and beta eMeasure testing which again we
16 were building what the heck is this testing
17 anyway as we were all trying to test it.

18 And my last thing is we had to
19 collaborate. And in the beginning that was
20 really hard to play in the sandbox a little
21 bit. Or I wouldn't say hard, I would say
22 quiet in the sandbox. But we got a whole lot

1 better at it.

2 Retooled just means you start off
3 with a clinical concept or a measure that's
4 already out there and then this one's actually
5 a little bit harder because you have to try to
6 figure out how to develop logic and find value
7 sets that may or may not be out into the
8 world. So some of the problems that we ended
9 up having, you know, we had input or
10 calculation constraints of the current
11 process. You know, how is it you can find
12 information or gather information from
13 multiple different care settings. That might
14 be inpatient versus outpatient and that became
15 a little bit challenging.

16 We had one of our measures that we
17 had to completely redefine because the measure
18 authoring tool, the logic that was out there
19 didn't allow us for multiple lookbacks, and we
20 wanted multiple lookbacks within one measure.
21 So we're just not there yet. So how is it we
22 develop measures that we can look at that

1 stuff.

2 Availability and specificity of
3 different values or coding sets. I talked
4 about some of the work we had to do with
5 SNOMED and looking for that.

6 The other piece that's really,
7 really important is that so much of the source
8 measures involve a human component. I know I
9 did it, here's my attestation, I check the box
10 and I move forward. That's not where you are
11 in the eMeasure world. You can't make an
12 assumption.

13 The idea -- this is one of my
14 favorite things -- is that we talked about
15 when I first jumped into this eMeasure world
16 you don't worry about it. What's going to
17 happen is these measures are going to be
18 developed, then they're going to be
19 implemented and seamlessly behind the scenes
20 they will be reported and that the provider
21 will never know it. Well, providers always
22 know it, they always want to know where they

1 know it. They want to see it in the EHR. So
2 that was another piece of some of the stuff we
3 learned.

4 So, we did some alpha testing. So
5 feasibility, are data elements present in an
6 EHR or could they be easily added. Are they
7 structured, are they free text. Usability.
8 You know, that's that whole workflow space.
9 How many -- what did someone say? They said
10 it a couple of times, 1,000 clicks to death or
11 something. Death by 1,000 clicks. I'll
12 remember that. Okay. So you know, all of
13 those pieces. You know, are we making it hard
14 for the providers to go through millions of
15 screens. That's kind of, you know. Are value
16 sets, you know, transitional or are they
17 standard and what do we have to do about that.
18 Beta testing really speaks to validity. Are
19 the concepts, is it logic, is it really -- is
20 it there that is really representing the
21 clinical concepts of what the measure
22 specification said.

1 And then reliability speaks to the
2 reproducibility and the consistency of
3 calculating the measure again and again. Is
4 it measuring what you want, all that good
5 stuff.

6 Next steps for us and our process.
7 And I really shouldn't necessarily have titled
8 this next steps. This is kind of what we're
9 living now and then also next steps. So we're
10 in coding and value set review and I really
11 thought we were done in the beginning of
12 September and then someone did something again
13 last week where we had to go through them
14 again.

15 And then the measure calculation
16 logic review, that's never ended. If you get
17 an email from Saul Kravitz you're like oh God.

18 (Laughter)

19 MS. HIBAY: And that happened
20 again 2 days ago. So then testing scenario,
21 development, execution. So we're going to get
22 to a space where we have to test our measures,

1 right? So we're kind of looking at if we're
2 doing ONC certification test cases are we also
3 looking at some other, you know, just
4 generally we're developing test cases also.
5 We're calling them implementation test cases.
6 Just are we in the ballpark at all with
7 reliability of the measures. ONC
8 certification will be a whole lot more
9 involved we anticipate.

10 You know, we in our process of not
11 consistently necessarily defining the alpha
12 and beta testing similar to what other measure
13 developers or eMeasure developers were doing,
14 we immediately right up front engage some very
15 fabulous providers and EHR vendors and we're
16 very thankful for their work in this process
17 but that is the absolute tiniest of toes stuck
18 in the water of where we need to go with this
19 process.

20 Every EHR is different. We're
21 looking at this measure authoring tool and
22 then the human readable and all that good

1 stuff. And that's one way of looking at it.
2 We have to look at the QDRA.

3 We also talked to another
4 organization that just ships all their data
5 out and they do some sort of analysis based
6 upon warehouse data scrubbing which is a whole
7 new process. There's so much that's out
8 there. Don't quote me but I think the latest
9 list of versioning EHRs that have received ONC
10 certification, so that means like if you have
11 an Allscripts product every single time you
12 got an update the list is over 22,000 long.
13 How is it we're going to develop measures that
14 can be utilized by all these systems? We've
15 got a lot of work to do. It's a lot of work
16 to do.

17 So, eventually these measures are
18 going to be implemented. I've got a 5-minute
19 warning. And then we'll also have to be out
20 there doing stakeholder input again.

21 Some lessons learned is that
22 accountability factor. I kind of talked about

1 that earlier. Providers want to know very
2 strongly where it is and what it is you're
3 going to be reporting about them and their
4 measures.

5 You know, when we looked at a
6 bunch of EHRs and I see a little checkbox at
7 the top lefthand corner and right behind it it
8 says medication reconciliation. You know,
9 that's clearly someone reporting a clinical
10 quality measure. And you can see those things
11 embedded throughout numerous EHRs.

12 Collaboration between everyone is
13 needed. And the more eyes on your product the
14 better, on your eMeasure the better because
15 we're just in the infancy right now and so
16 more questions people can ask, that'll be most
17 helpful. Any questions?

18 DR. BUTT: Well, you had 3 more
19 minutes left.

20 MS. WATT: Good afternoon,
21 everybody. Thanks for having me here. I'm
22 going to be fast, I promise.

1 I'm Ann Watt. I'm an associate
2 director in the Department of Quality
3 Measurement at the Joint Commission. And what
4 that means basically is that I have
5 responsibility for the team who develops all
6 of our standardized performance measures who
7 are our accreditation and certification
8 programs and sort of by default I inherited
9 the responsibility for our work with eMeasures
10 as well. And so that's I guess why I'm
11 sitting here.

12 Here is our lovely mothership. I
13 just always like the opportunity to get this
14 in here. Mostly I'm sure that everybody has
15 heard of the Joint Commission. But our
16 mission is to -- and the important words for
17 me here are to continuously improve healthcare
18 by evaluating healthcare organizations.

19 And one of the ways that we
20 evaluate healthcare organizations and this has
21 been going on since 2002 is to require
22 hospitals to collect data and to report data

1 to the Joint Commission as part of their
2 accreditation requirement.

3 So we started in this measure
4 development space actually probably 20 years
5 ago but as I said it's only been 10 years
6 since hospitals have been required to collect
7 data for us. But that's why we did it, to
8 help inform the accreditation decision.

9 And this is probably difficult for
10 you to read on the screen but in a nutshell it
11 is our measure development process, our paper-
12 based measure development process. If you
13 look it doesn't vary very significantly from
14 the process that Sharon and her group follow.

15 But basically we start with a
16 literature review and an evidence review. We
17 also have established technical advisory
18 panels and the people on the panels generally
19 speaking are content experts. Our measures
20 are developed in sets and the idea there being
21 that if you appropriately define all the
22 domains of treatment and care for a particular

1 clinical topic, if you look at the results of
2 measures in each of those or as many of those
3 domains as you can find measures you can
4 pretty much get an overall picture of the care
5 rendered to people by that healthcare
6 organization. So we try to get technical
7 advisory panel members who can help us
8 identify those domains and can help us
9 identify measures that are already out there.
10 Whenever possible we try to use existing
11 measures.

12 We also have public calls for
13 additional measures after our TAP has
14 determined the need for specific measures in
15 specific domains. Our group then gets
16 together in terms of drafting a measure set
17 and draft specifications. They go out yet
18 again for public and stakeholder comment.

19 It's very important to us and the
20 Joint Commission prides itself on the fact
21 that the measures that we use are very heavily
22 evidence-based, they're based in science. And

1 so all of this public feedback and all of the
2 technical expert feedback is our way of trying
3 to ensure that we get that.

4 After we have settled on a final
5 set of draft measures our staff goes into the
6 in-the-weeds process of doing measure
7 specifications development. That includes all
8 the things that Sharon talked about,
9 numerators, denominators, exclusions. Each
10 data element required to compute a measure is
11 identified and defined in what we feel -- felt
12 I guess is a very precisely defined manner.
13 We have measure calculation algorithms and so
14 on and so on and so on.

15 We also do alpha testing of our
16 measures. We also do an extensive pilot
17 testing of our measures including reliability
18 testing where we actually go out to hospitals
19 who are piloting the measures and do re-
20 abstraction of data that has already been
21 abstracted by the hospital and do a data
22 element by data element comparison.

1 We also do validity checks with
2 the hospitals on alphas, all of the things
3 that Sharon's talked about. And then
4 basically we come back to our TAP and say
5 here's how the pilot test went, these are the
6 things that we've learned and the reliability
7 examination and these are the final measures
8 that we would recommend. What do you think.

9 And then presumably we get
10 finalization of a measure set. We prepare
11 them for national implementation which means
12 not only implementation by the Joint
13 Commission for use in accreditation. We have
14 14 sets of measures that are available to
15 hospitals to choose and presently hospitals
16 are required to collect on at least 4 of those
17 measure sets if they want to be accredited.

18 Also, preparation for national
19 implementation involves going for NQF
20 endorsement and I say ditto, ditto, ditto to
21 everything that Sharon said.

22 Our measure development process

1 takes about 24 months including the pilot
2 testing and that doesn't include the time, the
3 1 to 3 years that it takes to get a measure
4 endorsed by the National Quality Forum. It is
5 a very expensive and extensive process.

6 As far as the eMeasure world is
7 concerned we sort of fell into it or actually
8 were pulled into it. And we've been involved
9 with measure retooling for meaningful use
10 since the very beginning and in fact weren't
11 even aware of it for awhile because the
12 determination was made to use two of our
13 measure sets for the HITSP back in the day if
14 you recall that acronym. A retooling process
15 that eventually resulted in the HITSP
16 Technical Note 906, is that right? Okay. And
17 version 1.1.

18 And we actually had a very
19 peripheral role there because we really didn't
20 find out about it until it was underway. And
21 but we decided we really need to learn about
22 this don't we. And so we also have

1 participated with CMS in the re-retooling of
2 the TN906 measures. And again last summer in
3 the re-re-retooling of the stroke and the VTE
4 measures.

5 And we have certainly learned a
6 lot since that whole experience started as I
7 think we all have. You know, the models have
8 come a long way and everything else.

9 We also have participated
10 unfortunately -- I'll put in a little plug for
11 the Joint Commission. Everything that we have
12 done as far as eMeasures to this date we have
13 done for free on our dime. We are not CMS
14 contractors and it has been a very, very
15 labor-intensive process.

16 So we also have worked with CMS
17 contractors to retool all -- a lot of our
18 other measures as well. So at this point 27
19 of the 29 hospital measures in the Meaningful
20 Use Stage 2 program have been developed by the
21 Joint Commission either alone or in
22 conjunction with CMS with other CMS

1 contractors. So we really have been working
2 very heavily in this space and it's been a
3 steep learning curve but we are certainly
4 learning.

5 As far as where do we go from here
6 and what are we going to change in our measure
7 development process, well, obviously when you
8 heard me talk about the composition of our
9 technical advisory panels you didn't hear me
10 say anything about EHR vendors.

11 Obviously that's a problem because
12 one of the issues that we have realized in the
13 efforts to retool our measures is that there
14 is a degree of clinical complexity in our
15 measures that most and probably all EHR
16 systems are not able to collect. And our
17 concern is that the clinical richness of our
18 measures and the evidentiary base for the
19 measures is going to be compromised. So
20 obviously moving forward as we begin to do de
21 novo eMeasure development we need to work with
22 vendors and to talk with vendors to figure out

1 what it is that an EHR can collect that we
2 need from a clinical and from an evidentiary
3 perspective.

4 So that's our challenge moving
5 forward. We're looking forward to working
6 with all of you because I agree also with
7 Sharon, collaborate, collaborate, collaborate.
8 This is what we need to do to move forward in
9 this space and to come up with electronic
10 measures that actually reflect the clinical
11 richness that measures used for actually
12 improving patient care require.

13 So, we look forward to the
14 challenge. Thanks for letting us speak this
15 afternoon and thanks.

16 DR. BUTT: Thank you, Ann and
17 Sharon both. It looks like we have 20 minutes
18 left and I'm going to turn over to Rosemary to
19 start the process of the closeout session.

20 DR. KENNEDY: We'd just like to
21 wrap up if folks could stay just a little bit
22 longer. And would all the panel members, the

1 coordinators for the panels and the speakers,
2 if you would come to the front of the room and
3 repeat your presentation from this morning.

4 (Laughter)

5 DR. BUTT: So first of all, I
6 think as Rosemary said we'd like to thank you
7 all for participating today in this session.
8 I think it was truly a multi-stakeholder
9 session. So we've got doctors, nurses,
10 pharmacists, information technologists,
11 measure developers, EHR vendors, futurists,
12 government people. So everybody was in the
13 room and had some really nice dialogue which
14 we hope will continue as we move forward.

15 So, I think in this wrap-up
16 session the idea originally was to sort of,
17 you know, try to sort of see if there were any
18 gaps in our trying to come up with best
19 practices or specifically if there were any
20 specific recommendations going forward. And
21 so if there is anyone who feels that there was
22 something in any of those three areas that

1 they didn't get a chance to either ask or make
2 a comment on please feel free to come up to
3 the mike or if people online would like to ask
4 the question now is the time. You never get -
5 - especially the measure developers like this
6 in front of you.

7 So, anyone want to? Kathleen?

8 DR. CHARTERS: Something that was
9 implied but not specifically addressed so I'll
10 bring it up now is my concern is when we let
11 people pick the measures that they're going to
12 use, and I'm not saying it's a bad thing, but
13 the caution here is are we going to end up
14 fostering disparity of care as an unintended
15 consequence of that? Because I think when
16 we're trying to move forward with care and
17 what we're measuring and how we measure it if
18 we allow people to select what they're going
19 to measure do we end up with a system that has
20 disparity in the quality of care it's
21 delivering?

22 DR. BUTT: Anybody want to tackle

1 that?

2 MS. WATT: It's a good question
3 and I have to tell you I haven't really given
4 it a lot of thought to be honest with you. I
5 guess you know the easy answer is to say well,
6 you know what? In real life because most of
7 the measures that we offer to hospitals are
8 required by CMS as part of the Hospital
9 Quality Reporting Program really they need to
10 collect them. They're voluntary for the Joint
11 Commission, they're mandatory if they want to
12 get their full payment and of course most
13 hospitals do.

14 I think what we count on, and
15 maybe this is not a -- maybe this is a very
16 naive assumption but we believe that hospitals
17 should be choosing to measure those areas
18 where they understand that they have gaps and
19 they have need for quality improvement. And
20 to the extent that that happens I think it is
21 to the consumer's benefit because hospitals
22 are in fact looking at areas where they know

1 their performance may be a little bit weaker.
2 Again, may be naive but that's our philosophy
3 on the matter.

4 DR. PALEN: Well, actually I want
5 to change the question a little bit and
6 challenge the measure developers and CMS to
7 look at not healthcare now but look at it 15
8 years from now.

9 At Kaiser we already have pilots
10 going doing video, realtime video consults,
11 asynchronous consults by a video digital
12 imaging. One-third of our patient contacts,
13 over one-third are email communications, so
14 email visits.

15 We need to be able to account for
16 those kind of care delivery models that are
17 going to become more and more evident and
18 persistent as the twenty-somethings who do
19 nothing but text. They're going to want their
20 healthcare delivery not in face-to-face. We
21 have to have CMS not require face-to-face
22 visits because healthcare is going to be

1 remote monitoring. Thinking about assisted
2 living and SNFs, those data feeds are going to
3 become by remote products. Apps on your
4 smartphone. Ford's car that you sit down and
5 it's sending your blood pressure and pulse,
6 right?

7 Those kind of things are where we
8 need to be looking for 15-20 years from now.
9 We cannot keep designing systems and metrics
10 based on what healthcare looks like today.

11 DR. STUMPF: So I'd like to
12 address the comment more directly here about
13 disparities because I think part of that
14 patient characteristics that I showed you
15 includes things like the social environment in
16 which they live, their capabilities in terms
17 of transportation. Are they in a food desert.
18 What kind of community resources do they have.
19 Do they have health literacy problems. So I
20 think that may be where you were going with
21 this is that we don't consider that kind of
22 variation in the patient population and how we

1 can address them and create tasks that are
2 appropriate for those characteristics.

3 DR. CHARTERS: I really was
4 talking about the healthcare delivery system
5 itself and how if different healthcare systems
6 all have different sets of measures they're
7 using do you end up with if you're looking at
8 a bar graph a really uneven up and down
9 quality of care delivery. That's the
10 question. I'm just throwing it out there
11 because I know Meaningful Use Stage 2 --

12 DR. STUMPF: You're talking about
13 variation in outcomes.

14 DR. CHARTERS: Well, not just
15 outcomes.

16 DR. BUTT: I think you might be
17 referring to the fact that there are measures
18 that are used that are not uniformly
19 specified. So that's kind of where the NQF
20 comes in, that once you go through the
21 endorsement process they become national
22 measures and standards. And so that's kind of

1 where -- that's the whole concept behind the
2 NQF to try to eliminate that sort of variation
3 amongst the different measurements. If I
4 understood.

5 DR. CHARTERS: It's not really,
6 no. That it was possible that there would be
7 some measures that -- no organizations would
8 be using or working on. And could that cause
9 disparity. Because some areas of quality
10 would not be --

11 DR. BUTT: Right. And that's kind
12 of what -- I think that's kind of what the
13 government is trying to do to map these back
14 to the National Quality Strategy and then try
15 to build those into the stages of meaningful
16 use so that everybody is measuring assuming
17 that they care for those types of patients.
18 Okay, thank you. Yes, sir.

19 DR. ROBERTS: My question is
20 probably a little more pragmatic.

21 We are -- I've heard from many
22 sources including several today it costs about

1 one hundred twenty-five to one hundred fifty
2 thousand dollars to create a measure. No one
3 has yet addressed how much it costs to create
4 a de novo measure.

5 Creating a measure, making that
6 numerator and that denominator, identifying
7 the research behind it, rolling it out,
8 testing it in a paper world costs one hundred
9 twenty-five to one hundred fifty thousand
10 dollars. Got it.

11 What about how much is it really
12 going to cost us to create these measures that
13 we can use on an Allscripts system and an Epic
14 system and a Cerner system and so on and so on
15 and so on, that we can collect the same data
16 elements in the same way from all these
17 different systems using an electronically
18 created measure that actually gives the same
19 numerator and the same denominator in the same
20 way to the person who's looking at those
21 outcomes who is probably my grandma or someone
22 that really thinks it matters.

1 Now, she might not be looking at
2 that measure but she might be looking at the
3 hospital's website that says we provide X
4 quality based on this measure and comparing
5 that to another facility that says no, no, we
6 provide Y quality on this measure. And
7 knowing that one hospital is using Epic and
8 one's using Cerner and both of them are giving
9 the exact same valid response.

10 DR. BUTT: Anybody want to take
11 that? No? So I think that --

12 (Laughter)

13 MS. WATT: Actually, if I were a
14 cynic I would say well, we're never going to
15 get to that point because Epic and Cerner are
16 not going to be able to collect the measures,
17 or one of them is and one of them isn't. You
18 know, that's really where we are right now and
19 that is the challenge. We all need to work
20 together so that all EHRs can collect the data
21 and the measures that are thought to be
22 important to push the quality of care in this

1 country.

2 DR. BUTT: I think Helen wants to
3 say something.

4 DR. BURSTIN: Hi, Helen Burstin
5 again. I just wanted to let you know that one
6 of the things NQF is about to embark on is
7 some work funded by HHS to actually try to
8 figure out what is eMeasure feasibility, how
9 it relates to validity. So we're going to try
10 to be doing an environmental scan of what are
11 the current approaches, what works, what
12 doesn't work and see if we can actually help
13 create a set of standards that we can put out
14 there that people can comment on and say is
15 this the right approach. How many EHRs do you
16 need.

17 (Applause)

18 DR. BURSTIN: It's so rare for
19 developers to clap for us. Thank you, Ann.

20 (Laughter)

21 DR. BURSTIN: So, anyway, if
22 anybody has any thoughts or is interested in

1 this please let us know. It's got a really
2 short time line, done by January. So really
3 quick.

4 DR. BUTT: Very good.

5 DR. STUMPF: So the comment I have
6 is think about what a learning system really
7 would do. Because a learning system would
8 also identify problems and have evidence to
9 support the nature of that problem and
10 therefore the potential path to a solution.
11 So if we can identify best practices using a
12 learning system we can really automate the
13 generation of evidence and rules from the
14 system itself.

15 So right now we're thinking about
16 we have a rule, we're going to measure it and
17 then we're going to, you know, do a continuous
18 quality improvement cycle. But you can enter
19 that cycle maybe at a different point using a
20 learning system.

21 DR. BUTT: Sure. Yes, sir.

22 DR. NERELLA: So one of the things

1 that I feel that I would like maybe the
2 National Quality Forum or someone -- I think,
3 Zahid, I talked to you about this earlier was
4 having a unified document or something that
5 kind of talks about some of the things that
6 we've talked about. Like the definitions of
7 problem lists, what should be on there, what,
8 you know, those kind of things and unifying
9 that in a way that -- I think we've all talked
10 about it in different ways. But the question
11 is when you leave it like that there's a lot
12 of room for interpretation and then you have
13 a lot of variance. Setting more of those
14 guidelines.

15 And the other thing I think I'd
16 like to see is how do we engage our younger
17 generations that are coming into healthcare to
18 be more aware. One of the things that struck
19 me was we had a new cohort of hospitalists
20 join my group and I was kind of tasked to help
21 them with using our EHR and kind of bringing
22 them up to speed.

1 And when I talked to them about
2 meaningful use all I got was blank stares.
3 I'm like how can you guys not know at least
4 what meaningful use is. You know, I think
5 like Ted was talking about, I think the
6 younger generation is going to be more tech-
7 savvy but I believe there's always going to be
8 a spectrum.

9 You're going to have people who
10 are always going to be the high performers no
11 matter what, you're going to have people who
12 are in between, and then you're going to have
13 those that kind of lag behind no matter what
14 it is. I see that in my girls. You know, my
15 oldest daughter, she's very smart but she
16 doesn't really care about technology as much.
17 She can use it but she's fine. My second
18 daughter, she's all over it.

19 And I think we need to start
20 helping our people that come into healthcare
21 understand the use and the importance of what
22 healthcare IT provides to them and help them

1 to become not necessarily the highest
2 performers but get them closer to that N so
3 that they are using the technology that's
4 going to be available to them in a much more
5 efficient manner and a way that the data is
6 going to be available for us and all that kind
7 of stuff.

8 And I think we need to start doing
9 that now and getting people aware of it. And
10 I think we need to have some kind of model
11 that will start spreading that news.

12 DR. SOBKO: Actually there is a
13 model. That's the good news. So part of the
14 HITECH Act was to say wait a second, we're
15 pushing forward this whole technology but we
16 need trained people to support this new
17 technology, right. And so the HITECH Act
18 actually funded a certain amount of money to
19 go into universities, I think it was six.
20 Six, eight. And then there was also money for
21 community colleges.

22 And the reason that I'm very

1 passionate about this is because I'm taking
2 advantage of one of those university programs.
3 And before our university program started we
4 actually had to go through a couple of the
5 community college sets. And again, this is
6 all online so it's entire lectures online with
7 the slides, right.

8 So what our professors did at
9 Hopkins is they said before we start this
10 program we're going to level-set everybody and
11 you're going to have to go through some of the
12 community college pieces of education. And I
13 have to tell you they were fabulous.

14 And so this is out there. We just
15 need our medical schools to take advantage of
16 what has already been funded and created and
17 repurpose it. Because there was a colleague
18 of yours right in the front who was literally
19 talking to me about the same thing at break,
20 that we need to make sure that this new
21 generation understands this.

22 DR. NERELLA: And maybe it's

1 bringing the awareness. I think maybe that's
2 what it is.

3 DR. SOBKO: Maybe.

4 DR. BUTT: I think in response to
5 your first question one of the deliverables of
6 this eMeasures Learning Collaborative for this
7 cycle is to create a report from all this
8 multi-stakeholder feedback. And we will try
9 our best to incorporate as much detail as we
10 can of repeatable models around problem lists,
11 medication management because that's really
12 what the purpose of this whole discussion and
13 secret recording is, to try to get it into
14 some kind of a document that will be delivered
15 to HHS in November. Is that correct? Right?

16 So hopefully we will incorporate
17 more information that will be useful. Yes,
18 and it will have a comment period so please
19 feel free to comment on it.

20 MS. POLLARD: I'd like to just
21 comment to yours for a minute. I think we
22 need to embrace this paradigm of the new

1 generation in some way.

2 We had a 16-year-old OB patient in
3 our hospital and she would -- the nurses would
4 go in, speak to her. She was so non-
5 communicative. They went to the desk and
6 started texting her and she would tell them
7 how she was feeling, what she was going
8 through. That's how they provided her
9 education. And she really got into it and
10 opened up to them and her whole attitude
11 changed because that's the way they
12 communicate.

13 The other example is we were
14 having a downtime for an upgrade and we had
15 what I call a baby nurse come to her charge
16 nurse and say, "Well, I can't give meds
17 tonight." And the nurse said, "Well, what do
18 you mean you can't give meds tonight?" "Bar
19 code scanning's down and it's not safe." So
20 their whole mentality has changed. And
21 somehow we've got to capitalize on that to
22 invest them in the next solutions.

1 DR. STUMPF: So my comment about
2 this last remark has to do more with
3 usability. I mean you do have different
4 capabilities and you have to have something
5 that works despite that variation.

6 So an example would be your anti-
7 lock brakes on your car. You're driving on
8 ice. Both of your daughters should be able to
9 stop the car with that device. The computer
10 is doing that work behind the scenes. All
11 they know is they want to step on the brake
12 and have the car stop smoothly. And if we
13 really design systems right the kind of
14 variation you just described wouldn't be
15 relevant.

16 DR. BUTT: Okay, I think one last
17 question.

18 MS. SWANFELDT: This isn't a
19 question, it's just a comment regarding the
20 next generation and providers. I have
21 discussed this with medical school
22 administrators and apparently the curriculum

1 for med schools was revamped just several
2 years ago. And there's just no room is what
3 I keep hearing. There's just no room for
4 this. So, there's a disconnect there.

5 DR. STUMPF: It's like genetics.
6 Genetics is everywhere and you teach genetics
7 in context and HIT is everywhere too or should
8 be.

9 DR. BUTT: Okay, I think that
10 concludes the day. And we again thank you
11 very much. On behalf of the Programming
12 Committee for the eMeasure Learning
13 Collaborative I'd like to thank you all for
14 participating and engaging with us. And
15 please stay tuned. You'll probably hear about
16 some of the outcomes of this and previous
17 meetings. So safe travels and we will be in
18 touch.

19 DR. KENNEDY: And I just want to
20 take this opportunity to thank Dr. Zahid Butt
21 and the whole entire Planning Committee
22 because it really did work hard to bring this

1 together.

2 (Applause)

3 DR. KENNEDY: And we will be
4 pushing the report out to you when it goes for
5 public comment. So please share it with all
6 the key stakeholders because the purpose is to
7 provide recommendations that represent
8 everybody that participated today. Safe
9 travels.

10 (Whereupon, the above-entitled
11 matter went off the record at 3:29 p.m.)
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