

NATIONAL QUALITY FORUM

Moderator: Interoperability Project
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OPERATOR: This is Conference #: 82847937.

Welcome, everyone, the webcast is about to begin. Please note today's call is being recorded. Please standby.

Jason Goldwater: Good afternoon, everyone. This is Jason Goldwater from the National Quality Forum. And we want to welcome all of you for our third web meeting on the Interoperability Project where today we will be discussing the general results of the Key Informant Interviews which have included.

Our agenda for this afternoon is going to be divided into two parts. We recognize that there had been another of questions since the onset of this project regarding the scope of work. And we have invited ONC and Vaishali Patel from ONC in particular to present on the scope of work and to spend some time addressing any questions that you might have.

I realized that we have tried to answer questions throughout the project but this seems to make more sense and probably – and is certainly more appropriate to have Vaishali here who is serving as a Senior Advisor to this project that she'll present on the scope of work and to answer any questions that you may have.

So we'll have her present and then, we'll have period where you often ask questions directly to Vaishali. Then, we will begin with the discussion of the key informant interviews. We'll do a general overview, talk about the selected

candidates and spend some time on some major themes and relevant findings. We'll then turn it over to questions that you might have regarding the key informant interviews and perhaps any lingering questions you might have regarding scope of work. We'll talk about next steps and then we'll of course open it up for public comment.

We would like to begin before we get to Vaishali's presentation with the roll call of those who are present. Hiral, if you could take over, please.

Hiral Dudhwala: Sure, thank you. All right, Rainu Kausal?

Rainu Kausal: Yes, I'm here.

Hiral Dudhwala: Thank you. I know Mark Savage is unable to join us today, so we'll move forward to Julia Adler-Milstein?

Julia Adler-Milstein: Present.

Hiral Dudhwala: Thank you. JohnMarc Alban?

JohnMarc Alban: Well, I'm here.

Hiral Dudhwala: Thank you. A. John Blair?

A. John Blair: I'm here.

Hiral Dudhwala: Thank you. Chris Boone?

Chris Boone: Present.

Hiral Dudhwala: Thank you. Jason Buckner? OK. Hans Buitendijk? Kimberly Chaundy? Sarah Dinwiddie?

Sarah Dinwiddie: Here.

Hiral Dudhwala: Thank you. Mark Frisse?

Mark Frisse: Present.

Hiral Dudhwala: David Hirschorn?

David Hirsschorn: Here.

Hiral Dudhwala: Thank you. David Kaelber? Terry Ketchersid? John Loonsk? Terrence O'Malley?

Terrence O'Malley: Here.

Hiral Dudhwala: Thank you. Frank Opelka? William Rich? Robert Rosati?

Robert Rosati: I'm here.

Hiral Dudhwala: Thank you. Robert Rudin? Theresa Settergren?

Theresa Settergren: Here.

Hiral Dudhwala: Jason Shapiro?

Jason Shapiro: I'm here.

Hiral Dudhwala: Thank you. Bruce Sigsbee? Alan Swenson?

Alan Swenson: I'm here.

Hiral Dudhwala: Steven Waldren? Mariann Yeager? OK, is there anybody who just joined, who wants to announce that they're present? OK, all right. Thank you.

(Crosstalk)

Jason Goldwater: Next slide.

OK. So with that in mind, we'll going to turn it over to Vaishali Patel, a Senior Advisor with ONC, from the Office of Planning, Evaluation and Analysis. And as I already discussed the senior advisor on this project to talk about the scope of work. Vaishali, it's yours.

Vaishali Patel: OK, great. Thank you, Jason. If we can move to the next slide, please.

So, you know, first of all, Jason and NQF, I really want to thank you for the opportunity to, you know, allow ONC to present today to the committee directly. I think it should help with clarifying, you know, the scope of work on this project. And also, you know, enable you all as committee members to keep in mind what I discuss today as you review various data products, products rather than NQF will be generating.

And so, I think that's the reason I'm here just to – I think help you all as you go through and participate in this project. And I'm very excited that you all are participating. I know many of you, some are former colleagues and collaborators, so I really do appreciate your engagement in this effort. And I'm excited about this work and all the efforts that Jason and the NQF team have really put into this.

And, you know, Jason, maybe you are going to mention it later but, you know, the revised version of the Environmental Scan has been posted and is available now for public comment, they really made a lot of efforts to revise the Environmental Scan based on everyone's comments including, you know, ONC comments. And I would encourage all of you to take a look at the revised version of it and provide your feedback on it.

So, anyway, so now, you know, in terms of why ONC is hearing what we're hoping to clarify is, you know, one, why are we developing this measurement framework, what let ONC, you know, to ask NQF to embark on this, what are we hoping to achieve and what is its value, the step NQF will take to develop the measurement framework and what we envision, you know, why we specifically ask NQF to take the steps on how will the result of this project be used by ONC. And also just, you know, the critical input of the committee members in the public on various aspects of it. So I'll touch on that at the end. Next slide, please.

So why are we measuring this, why are we developing this measurement framework? First, next slide, first, I wanted to just provide a little bit of the policy context surrounding this and the rationale for why we're embarking on this.

First, for those that are not familiar, ONC in 2015 put out a document, what I'll refer to the interoperability roadmap that really lays out the milestone, the commitment for stakeholders both public and private to work together to achieve an improved interoperability. And as a part of that, there's a chapter within that document that specifically calls out for measuring progress related to interoperability.

And within there, there's a specific call to measure not only looking at the progress that's measuring interoperability itself, and calling out specific domains, within interoperability to focus on, which I'll go through a subsequent slide, but also the need to measure and report on the impacts of interoperability on care processes and (re-enable site) interoperability and identifying and measuring outcomes that are sensitive to interoperability. So that was deemed as a high priority in a long-term measurement goal for us to get to. And so that is, you know, one of the rationales for why ONC is very interested in pursuing this project.

Another is, you know, the Medicare Access and CHIP Reauthorization Act of 2015, MACRA, in there, within there, section within there, Section 106(b). The legislation called for a national objective to achieve widespread interoperability by 2018. And they called for HHS to identify a set of measures by which to report out on this. And so, ONC issued a request for information, so that's, you know, just a need to obtain, stakeholder and public input on proposed set of measures that we – that aligned closely to the measures that we, you know, the concept that we identified in the roadmap which I'll be discussing later, two-sets progress towards meeting that goal.

As a part of that though, we also ask stakeholders to provide input on how we could really advance the measurement of interoperability and stakeholders had a lot of great suggestions on this and what, you know, ONC should prioritize. And this included system-generated and patient-centered measures of interoperability that we're not burdensome to providers, being inclusive of providers along the care continuum and beyond, so not just focusing on (being) called users, EHR Incentive Program participants, and also assessing the impacts of interoperability.

So again, you know, through this process, I think, you'll see that it echoes that priorities that were identified in the interoperability roadmap. And again, just reinforce for ONC the need to advance the measurement of interoperability including the measurement of its impact.

And finally, ONC Health I.T. Policy Committee can, you know, put together a report that also identified the need to measure and identify outcomes that were sensitive to interoperability, and to, you know, be good in reporting out on that. So that's again, you know, all these are just policy drivers for why ONC is really focus on the work that NQF is embarking on today and that you all are participating in. Next slide, please.

So just to touch on, you know, some of the concepts that the interoperability roadmap identified as key priority for measurement. And you can see here that this graphic is, you know, rather simple. It's, you know, like a structure process outcome type, you know, model here, where, you know, we envision that, you know, enhancing the capability to exchange interoperable manner through inclusive option approval, infrastructure, standard services and policies will enabled increase exchange of electronic health information in an interoperable manner so that it's available when and where it's needed. And will be subsequently used by clinicians for decision-making which is critical is subsequently, actually improving outcomes that are sensitive to interoperability. Next slide, please.

We dive a little bit deeper into that kind of more simplistic model to really identify key priorities for measurement in the near term. And you'll see in the box that it's kind of a dense graphic, so I'll try to, you know, go through each of the three areas, going left to right. So the strategies to enable interoperability, you know, we define as drivers such as, you know, provider participation and delivery system reform as a driver potential driver for increase interoperability. The technical requirement for the standard, having the standards in place, and then shared decision-making, rules of engagement and accountability, those are things that relates governance for example.

And these were envisioned to then support the actual movement of electronic health information in an interoperability manner, so the middle section of this

graphic. And within interoperability, there were key areas that were identified as important to measure. This was sending, electronically sending of health information, electronically receiving and then subsequently incorporating the information so that, you know, so that it could be used, and as well as finding, you know, being able to query or find the information from outside sources.

And in addition, you know, what are the barriers to interoperability to, you know, engaging in interoperability is also identifying as important to measure so we could understand why we're seeing variation and, you know, say provider's rates so as far as we're sending, receiving, you know, finding, you know, such that we're integrating that information into their EHR and using it.

And was also deemed inform to measure this across as why the populations and settings. In the near term, the priority was placed on looking at hospitals, physician behavioral health and LTPAC settings, as well as across individuals. But in the long-term, to be on 2017, you know, for us to consider, you know, other settings as well.

In addition, on the most right hand side, you know, it was deemed important to measure some of the near term impacts of interoperability, not necessarily on clinical care and outcomes. But, first, to assess whether actually this interoperability lead to greater availability of information from outside sources at the point of care, does it reduce gaps and information exchange experienced by individual, are they still having to cart around a medical reference from provider to provider.

And to what extent is the information that providers are exchanging, so they're electronically receiving to what extent are they actually using that information for decision-making purposes and to managed care. So these are the key areas that were designed as important to measure for the near term. Next slide, please.

And in terms of ONC's current measurement approach, with regards to the strategies to enable interoperability, we use a mix of data sources who assess some of the drivers and shared decision-making aspects of things, like for example, you know, we have national surveys in place of physicians and

hospitals and other types of organization as I'll describe shortly, that allow us to report on, you know, participation in various types of delivery systems reform efforts. We can also get that data once MACRA is implemented fully on providers' participation in advance payment models and the merits – the MIPS Program which is also will be, you know, enabling greater participation delivery system reform efforts.

So, we have, you know, some measures and data sources in place to monitor that. We're also in the process of putting together a strategy to assess the adoption, the implementation and use of standards, so there's a separate scope of work for that that is underway right now. Next slide, please.

And currently, with regards to measuring interoperability itself across those populations that I mentioned, the hospitals, physicians, behavioral health, LTPAC and individuals, and the near-term indicators. We have surveys, national survey, nationally representative surveys in place or underway that allow us to reports on, you know, providers engagement and/or – various, those various domains of interoperability as well as barriers to interoperability, and some of these near-term impacts.

And we also, obviously, for those that are eligible providers and eligible hospitals that are participating in the EHR Incentive Program, we have – on the Medicare side, we have the performance data as well so we can look at your performance on the exchange related measures that specified in the – for the Meaningful Use measures. Next slide, please.

And, you know, for the long-term, you know, we do have a need to really identify, you know, the key domains of interoperability that are appropriate and relevant to measure across other settings. So, trying to understand what's important as it relates to measuring interoperability for example for schools may likely be different than social services or public health, or for EMS first responders. So these are areas that I think, you know, ONC was interested in identifying where the important areas to measure there.

And then also as it relates to the impacts of processes of care that are enabled by interoperability, identifying specific processes across settings and

populations, and also identifying the impacts on outcomes that are sensitive to interoperability is also need.

Some of the domains and settings that are listed here are, you know, just examples of possible processes and outcomes. But, you know, what we really need is to have a process in place to really identify this a more rigorous way. Next slide, please.

But, you know, raises the question of, you know, what are the gaps and limitations in the current measurement. The current measurement of interoperability itself is limited. We primarily use – I mean it's national representative which is great and it covers, you know, a variety of settings. However, it is self-reported data that's difficult to validate. And although it provides – it gives us the provider's perspective which is important.

But in and of itself using that alone as a measure, you know, is – gives us a very limited corporate of what is going on with regards to interoperability. The measures, you know, we're forced because of the survey. We use rather simple measures and we can't really reflect the full breadth of interoperability through survey measures.

And the current approach, you know, also doesn't really focus on the long-term measures in terms, you know, trying to identify what settings and populations we should be considering, what domains, as I mentioned, we should be measuring across these other types of settings and identifying what aspects of, you know, in terms of the impact that we should be measuring. You know, what processes are enabled by interoperability, what outcomes are sensitive to interoperability that we should be measuring.

And so, you know, in addressing these gaps and limitations is challenging. You know, interoperability and exchange of information, you know, similar to our healthcare system has, you know, fragmented. There are number of different ways to enable exchange. And so, this is – it's challenging to measure. And that's why we asked NQF to focus on this. The NQF process offers the ability to confer with experts such as yourself as well as the public, and gather stakeholder input through really transparent process. And that's

something that we were really looking for, you know, to get this wide level of input before we embark on, you know, specific measures that assessed the impacts of interoperability and identifying other key aspects of interoperability that we use in a measure. Next slide, please.

So that gets to, you know, what are we hoping to achieve and the value of this specific project, next slide.

So in terms of the measurement areas to be addressed by NQF, as I mentioned, you know, we really want to advance the measurement of interoperability to move beyond just survey-based measures. I think survey-based measures should continue to be there, having the provider perspective is really important. However, having this system-generated measures that tell us about, you know, can tell us about the level of interoperability that are based on actual measures of usage would be highly valuable and complimentary to the survey-based measures. And identifying aspects of interoperability to measure that would be applicable to settings, you know, beyond the care continuum, you know, the will be – will also be important. And then, finally, the measurement of impact of interoperability on processes and outcomes.

And these four areas are the key areas that we have identified that should be addressed by NQF in this type of work. Next slide, please.

So specifically, you know, what we are asking NQF is to develop and help operationalize a measurement framework. This measurement framework would address the current limitations and our approach to measuring interoperability and advancing that, so it's much more sophisticated, and also meeting our long-term goals in terms of the measurement need by identifying the domain of interoperability that can be system-generated. Identifying the domains of interoperability to measure across populations and settings beyond just the care continuum, identifying the care processes or use cases that are enabled by interoperability, and then identifying those outcomes that are sensitive to interoperability.

And finally, identifying measures existing measures that relate to all those areas. So system-generated measures, measures that might apply to settings

beyond, you know, the ones that we've traditionally focused on, and processes and outcomes related measures. And it's important to note that, you know, with the development of this measurement framework, we want to ensure that it's not – that we can actually operationalize it and implement it. And so another important aspect of this is to identify the technical infrastructure that will be needed to make this framework to reality. So that is another important component of this work that NQF is embarking on. Next slide, please.

So why develop a measurement framework? I mean why embark on this approach as opposed to meeting some other approach to address the gap that we identified. And we think that developing a measurement framework is a very comprehensive mental, you know, methodical approach to addressing the gaps and limitations that we identified. Specifically, the measurement framework will outline measurement concepts including, you know, identifying suitable existing measures and data sources, measures and concepts that could potentially be use, but that might require some tweaks or modification. And also we'll identify gaps where there is a measurement domain that has been identified as important. But there is no data source available or there aren't measures that are yet developed. So that will be an important outcome of this work and that's why it's so valuable.

However, to really make use of this measurement framework is very important that is surrounded in the latest evidence. As you know with interoperability things are evolving so rapidly. So it's important that we have the latest information to help inform the measurement of interoperability and its outcomes. And that it – informed by real world experience because not everything is published. A lot of work that's being done related to interoperability exchange might be done by key developers, and vendors, and other types of organizations that are on the ground doing the work but not necessarily publishing anything about it.

And so, it's really important that we have both the latest literature as well as talking to individuals to really learn about what is the latest information is and the results that Jason will be talking about today really will help inform that second aspect of things, you know, from the ground up perspective, you

know, what is important to measure with regards to interoperability and its impacts on outcomes. Next slide, please.

So how will this measurement framework be developed? Next slide.

So we envision that there are some key steps to developing the measurement framework. One would be really an Environmental Scan. As I mentioned, you know, having the latest evidence as well as the real-world experience to help ground the foundation which to identify key measure concepts as well as the system measures. So this includes the literature review as well as the review of the existing measures.

The draft Environmental Scan and Jason can probably speak to this for a little bit later that was posted yesterday include some elements of both, you know, it fully includes the literature review. It does include some of the review of existing measures but there's also going to be an additional set of measures that they're in the process of reviewing that we'll be sharing with you soon.

So those sets are critical to identifying some of the key outcomes and processes as well as measure concepts. And then the key informant interviews as I mentioned earlier that the aspects of this will help kind of frame what's going on, on underground with regards the measurement of the interoperability and its impact. And that those things together, taken together will be used to develop the measurement framework, the draft measurement framework and with input from you all and the public a final measurement framework will be develop. Next slide, please.

You know, I'm going to kick a little bit – take a little bit of fun to go through each of the key kind of products that NQF will be sharing with you all as part of this work. And I wanted to share the goals of each of these products with you because I think it will help guide your review of these products and also – should light on, you know, the process a little bit more.

So the goal for the Environmental Scan itself, you know, as I mentioned are to use the latest evidence, so picking what's in that latest literature, great literature to identify the key domains of interoperability that relate to these

key concept priorities that ONC has identified. So sending, receiving, finding, integrating, and then the availability in use that can be sustained generated and reported. And those measures as I mentioned earlier really should focus on usage not in capability. You know, so this is not about reporting on what the standards are in place but in fact, whether information is flowing.

And to identify – to the extent that literature does identify some technical requirements for developing such measures that should be included as part of this Environmental Scan Report as well. In addition, identifying the key domains of interoperability to measure across population and settings, the care processes and use cases that are enabled by interoperability and send these outcomes that are sensitive to interoperability. And as I mentioned earlier also including existing measures that relate to each of the item that I just described. Next slide, please.

The goals of the interviews which Jason will be describing today, because that's the (presentation) will be describing subsequent to this presentation, will be really are – are really to supplement the Environmental Scan. The goals are very similar to what I just described in terms of the Environmental Scan. But it's really from the interviewee's perspective and their experiences.

And in addition, we're also hoping to obtain critical insights and identify the (novel) measures that might be in use by organization but that are not published or – and what could be very relevant to the scope of work. And finally, to identify key technical requirements and current realities with regards to the I.T. infrastructure to take into consideration when implementing the same work. Next slide, please.

So the measurement framework itself really represent the synthesis of the findings from the Environmental Scan and the interviews that will address the key goals that I just, you know, been pounding in during this presentation, you know, that relates to identifying systems generated measures, identifying key aspects of interoperability to measure across populations and setting key aspects, key processes, and outcomes that are sensitive to interoperability.

Also that will set synthesis will identify this key measure concept that will, you know, included in the framework. The framework will also include an inventory of existing measures that are applicable to the goal of the measurement framework. And within the measurement that this document, there will also be a discussion of how these existing measures align or don't align with federal measurement and regulatory reporting requirements.

And this regard to operationalizing the measurement framework with the, you know, the I.T. infrastructure needed, you know, what are the current realities that need to be take in account will be important that measurement framework include potential data sources that can be leveraged, what kind of existing data collection mechanism might be in place. Also specifically, Health I.T. infrastructure standards and other technical requirements needed to implement than measurement from both, as I mentioned earlier. Next slide, please.

Well, finally, how will the measurement framework being used? Certainly, the measurement framework will advance the measurement of interoperability. And also the measurement of interoperability's impact on care processes in health related outcomes. And specifically, ONC will leverage the measurement framework to really identify and use or develop depending on, you know, what's recommended more refined measures, so not just use the survey-based measures that hopefully other kinds of measures that are system-generated with this progress related to interoperability.

Also, to develop measures and identified data sources that might be needed to measure the impact of interoperability. And also to the extent that there are existing measures that are identify through this work, you know, always be plan to leverage that to begin measuring the early impacts of interoperability and be able to monitor that over the long term. Next slide, please.

So finally, I'd like to thank again all of you, the committee members, for volunteering your time and efforts to this endeavor. It's really critical as I just describe to a lot the policy work that is being done. And more importantly just to better understand, you know, what impact interoperability is having on healthcare, in health outcomes, that really, you know, critical to measure from a public health receptors. So your involvement is really appreciated.

You know, I hope this presentation has been helpful in, you know, or will be helpful as you review these various data – these products that NQF produces that leads to this development of the measurement frameworks. This will include the Environmental Scan that was just recently posted that, you know, Jason and his team has substantially revised and worked really hard on.

You know, having the scope of this project in mind, I think will be very helpful in understanding what should, you know, what should be included within each of the products that you'll be reviewing. And also, you know, really putting on your hat, your domain of expertise and using that as a lens to really provide feedback, critical feedback to each of these documents so they can implement through. And that way, when we come together for the in-person meeting, which I'm excited to meet you all, see you all again, that can really use that time that, you know, all these products are foundation for that meeting.

And so, you know, if we can get these products to the point that they're in really good shape, we can really leverage that in-person meeting time really efficiently and, you know, focus on identifying the key domain that should be included in the measurement framework and really identifying what existing measures and I.T. infrastructure will be needed to make the measurement of the (operationalization) of that framework a reality, it seems a little tongue tied.

So, anyway, if you have any questions about interoperability measurement more broadly or this progress specifically, feel free to contact me. You know, I know that interoperability itself, the measurement of that is very broad. And even the scope of work is quite ambitious. But I do think that there are specific reasons as I discuss why we chose to focus on each of these aspects. And – but we are very open at ONC to really advancing the measurement interoperability overall. And so if there are other suggestions on what else we should be focusing on or measuring, you know, for our future projects, always welcome and open to suggestions.

So I'm happy to take any questions if there's time. And if not, you know, feel free to e-mail me with any questions you have. And I look forward to meeting you all in person in March.

Julia Adler-Milstein: Vaishali, this is Julia. Can I just have one quick question?

Vaishali Patel: Sure.

Julia Adler-Milstein: I just wanted to make sure I'm understanding whether you want us to be able to sort of link specific measures of interoperability use to outcomes or should we sort of take the bucket of use measures and then separately we're going to think about the bucket of outcome measures? Do you see what I mean, like I feel like we would get to a different kind of outcome?

Vaishali Patel: Yes, I know what you're saying. Yes.

Julia Adler-Milstein: Yes.

Vaishali Patel: You know, I mean like what could conceivably say, OK, like how is the measure – like what's the impact of sending for example.

Julia Adler-Milstein: Exactly, exactly.

Vaishali Patel: Versus what's the impact of receiving versus what the – and I think, you know, I personally think that that's a little too granular, you know, to really try to – because there's – first of all, there's not a huge literature on this and there's not – yes, I don't think we can get to that level with this.

I, you know, I think it's, you know, my take on it is that, you know, it's better to just focus on those key things separately and it's also – it might be hard to really unpacked, you know, different aspects of sending, receiving, finding and integrating, you know, to think that some of that happens in combination, you know, as opposed to like, you know, those are – we've created those different domains for the purpose of, you know, measuring progress. But in, you know, in reality, I think, you know, many of you are clinicians who would know, you know, those things are very fluid and you do a couples or a few of

those actions at a time and so to try to assess the impacts of the different combination of those aspects of interoperability.

I don't think that's really necessary for this and that's not what we're necessarily looking for. We're not really interested in what's the impact of sending versus what's the impact of receiving, you know, we want to look at the whole – we want to look at the whole package.

You know, that being said, obviously like, you know, there's something like medication reconciliation, there're certain processes that have to be in place, certain aspects of interoperability, that have to be in place in order for, you know, a provider to do med rec or someone to do some other processes that's enabled by interoperability.

But I don't think we need to get into that level to assess the impacts, you know, to have it tied to whether something – one specific action occurred previously, you know, as long as it's enabled by interoperability.

Julia Adler-Milstein: Right. Thank you for clarifying that.

Rainu Kausal: Vaishali, this is Rainu. I found your slides very helpful. And I was wondering if you could actually share them with the committee?

Vaishali Patel: Yes, sure. I'd be happy to just e-mail everyone on the invite with the copy of the slides, sure. I'm happy to do that.

Jason Shapiro: Actually, Vaishali, this is Jason, we have a copy of your slides, so we can go ahead and do that since we have the ...

(Crosstalk)

Vaishali Patel: Yes. OK.

Jason Shapiro: We'll do that after the meeting.

Vaishali Patel: OK.

(Crosstalk)

Hans Buitendijk: Hello, this is Hans Buitendijk. First of all, I really appreciate the update have provided some good clarity around in the context and the relationship.

Related to the last question asked on that, to what extent do we approach use and potential impact separately. On the one hand, I absolutely appreciate from approach perspective to initially look at that separately to identify potential impacts, clinical outcomes that are impacted by it separately from interoperability use measures. On the other hand, if we do not attempt to, and the question is, at some point on when, if we do not attempt to at least identify potential correlations there, I'm curious how much that really will tell us about how much interoperability provides a positive or neutral impact on clinical outcomes.

For example, having access and increased access to images available from others providers, does that – does not – that not reduce the amount of duplicate images being every quarters, the availability of medications profiles and med reconciliation, to what extent does that reduce med errors?

The concern that I have if we don't try to get – at least make some leeway into that, and I absolutely appreciate that's not going to be an opportunity we can do and achieve all at ones. But then we might get into the space of counting widgets of interoperability pockets flying around but not knowing whether sending them around will actually be meeting full or not.

So that's the concern. I understand the challenges. I agree we need to start to look at them independently. But if we don't try to take the next step, how much or how far we will be able to move the needle?

Vaishali Patel: Yes, no. Hans, I appreciate that comment that, you know, you raised an important point.

You know, I think for the purpose of the measurement framework, it's important to identify this concept that needs to be measured. Now, when we're looking at specific outcomes to like duplicate test ordering, for example, we are going to want to know correspondingly, you know, to what extent, you

know, our test images available or being, you know, sent and does that lead to this specific outcome.

And that in my mind, when we talk about operationalizing the framework, you know, that linkage should exist. So, you know, I don't – I don't know if that confuses matters or not. But, you know, I guess what I'm trying to say is at a high level, you know, we're going to be identifying as part of these processes these measurement concepts. And so, you know, one can kind of do, you know, a diagram or something and, you know, follow, you know, what is the – you know, where are the standards needed, you know, and then down to like, you know, what are the specific aspects of interoperability that need to be in place in order for this specific outcome to be improved.

But I don't know if we necessarily need to kind of follow that diagram for the purpose of this framework. I do think when we're actually going out measuring, you know, and there are many studies like, you know, that folks on the phone and, you know, our committee members have conducted that have look specifically at that, you know, they looked at the measurements of the specific aspects of interoperability and does it lead to this specific outcome.

So, you know, I would envision when we actually measure that, we will going to – we are going to want to say like, you know, is interoperability in place that allows us for this to happen. But, you know, I'm just thinking, you know, the measurement framework more broadly. I think it's going to be very difficult to do in this specific project. Unless we decide as a group that we're only going to focus on a certain number of use cases/processes which, you know, you all are welcome to decide how to go about doing that. If that is the case, then I think yes and it's possible to do what you're describing, Hans, and what Julia also discussed.

But, if we want to take a step up a little bit and be a little bit broader than that, then I think it's going to be really hard to view all that within this scope of work.

So, you know, I think – I do think it's a matter of, you know, figuring out what's reasonable to do. And this is something that – I think it's a good point of discussion and it's not necessarily up to me to decide per se, but I do think we wanted to do something that's manageable.

And my first reaction to this is, you know, or the way I've been thinking about this is that, you know, we want to identify these key aspects of usage that we need to measure and are there more sophisticated measures like I mentioned. And, you know, generally speaking, that might get some more, you know, and we – you know, depending on what – I have another chance to read the most updated version, the Environmental Scan, but my guess, you know, based on what I've seen is, you know, it is on the broader side. It's not like measuring number of, you know, radiology test sent, you know, defining, you know, by data type, by what, you know, the specifics to get at that one specific process measure, outcome measure, because you'd have to go back and do like I was saying, go, you know, go backwards and follow all the steps that you should be taking for that specific measure, which I don't know if it's necessary for this framework.

And Jason and (Helen), I don't know what your thoughts are on this as well based on your prior experiences developing measurement framework. But I do think when we're operationalizing it and selecting some specific measures, you know, once that identification of the measures has happened, and let's say we prioritize three or four measures that we want to focus on, yes, you know, we're going to want to go back and, you know, not just to do it, let's say, based on direct transactions only or something like that but, you know, if we can get that to more refined measures, that will get, you know, radiology test sent, you know, something that's more specific, that would be ideal.

I just – I also don't know if that's possible, you know, to do at a national level. So that can be done in studies, local regional studies. But anyway, I might be getting a little off target here, but I welcome others on the committee and, you know, Jason and (Helen) if you're on to comment as well.

Poonam Bal: Thank you, Vaishali. I think we've had a lot of great questions and thank you for that clarification. But we do need to get to key information interview. So

committee members have additional comments that they – or questions they have, they can always feel free at the end when we open up our comment – question period to make those questions or to just go and e-mail the project team or Vaishali directly and we can make sure your questions get answered.

With that, I'll pass it to Jason to start talking with the key informants.

Jason Goldwater: Thank you, Poonam, and hello everyone again.

So, we have, as of last week, completed eight of the key informant interviews and we were able to abstract sort of very dedicated effort of a wonderful team, many of the key themes and findings that came from those interviewees. I want to talk to you today about some of what we were able to identify that goes outside of the literature as Vaishali pointed out that the point of the interviews was really to find information that is not available in the literature that is being produced by individuals that are actually on the ground so to speak, doing interoperability work and also to identify possible de novo metrics that are being used or those that are being considered.

So the objective of the – key informant interviews were to supplement the Environmental Scan. From the interviewee's perspective, identify key domains of interoperability that could be system-generated or reported, key processes enabled by interoperability and potential outcomes, sensitive to interoperability. That in turn would then help identified novel metrics that are being developed or are used, system-generated measures will not focus on capabilities but actual activity, that's (inaudible) probing on the application of data sources, such as more valid data, NQF-endorsed measures and measures from other sources including claims data, review of measures from federal partners, Health I.T. developers, (HIS) and other entities that enable exchange.

And then, finally and certainly what we've done incredibly valuable, assessing and taking into consideration, the current realities in implementing framework for technical infrastructure required for both system-generated measures of interoperability as well as processes and outcomes that are also enabled by interoperability. Next slide.

So the overview to supplement the information of data found within the literature review, we conducted a series of key informant interviews to obtain information and details on interoperability measurement. We could not attain through the literature that we reviewed, it was to identify existing and future measures and possible data sources, processes and outcomes enabled by interoperability and then to take into consideration the current realities in implementing the framework. Next slide.

We collaborated with all of you. As you know, we did give you our protocol and asked for suggestions. So, all of you have wonderful ideas about individuals that we should consider in interviewing. I think a lot of you know, especially those of you that are health services researchers, I know that we are under a limit that we can only interview up to nine. If we go beyond that, we actually have to go through the OMB clearance process which would take the duration of this project to finish. So we did have to keep it at nine.

So we did develop a selection criteria for potential interviewees, which included familiarity with an experience in developing data exchange networks. Knowledge of interoperability needs, up and among different users, such as providers, patient and family caregivers, EHR vendors, et cetera, knowledge of the technologies to support interoperability such as encounter notification systems for master patient indexes, knowledge or process as an outcome sensitive interoperability and the use of system-generated data sources to generate measures of interoperability.

Based on feedback from all of you as well as from ONC and CMS, we identified a list of candidates and contacted them to arrange a one-hour phone interview starting in early to mid-January. We did try to do this earlier, but because we ran up against the holidays, in which everyone is traveling or already gone, we were only able to start in the earliest part of January. Next slide.

So, those that we were able to identify, we had a payer, Jeff Schiff from the Minnesota Medicaid agency. We talked to David Kendrick who runs MyHealth Access, the health information exchange. We talked to both Ryan

Smith from Banner Health Systems and Sid Thornton from Intermountain Healthcare, which both represent integrated delivery systems.

We talked to (Brent Quire) from Medicity which is a health information exchange vendor as many of the Medicity is all owned by Aetna. We talked to John Voith from Athenahealth. He is an EHR/HIE vendor as an EHR vendor. We talked Doug Fridsma, formerly the Director of Standards and Interoperability for ONC, who is now the CEO of the America Medical Informatics Association. And then we talked to Robert or many of you probably know him as R.M. Cothren from the National Association for Trusted Exchange.

There is one individual who is not here because we have not interviewed him yet, but we do intend on going forward with that, and that is Eric Coleman from Precision Medicine. We feel and we talked about this with our co-chairs, given his very extensive knowledge of this area, in addition to his personal story with the relation to the necessary exchange of patient data, he would provide very valuable insight that would help develop the framework. Unfortunately because of his extremely busy schedule, he is not available to talk to us until the middle of February.

We're still going to go ahead and go with the interviews since we have only interviewed eight, so we are allowed one more. We will not be able to include these comments into the report because it's coming too late. But we – again, because I think these co-chairs, hopefully all of you feel that his insight would be incredibly valuable, we're going to conduct the interview to summarize, identify what he said and we will present that to you in March when we meet in person and then when we developed the final report, we'll incorporate his major themes and findings. Next slide, please.

So the key informants, we also aligned the key informants, so that was Eric Dishman, not Eric Coleman, I'm sorry.

So the key informants we aligned the different topics with the different categories of interviewees. So we had the payer talk about measures of interoperability beyond the health care continuum. We talked with the health

information exchange and integrated delivery systems about interoperability-enabled processes or sensitive outcomes. We talked to the HIE vendor about system-generated or reported data sources for interoperability measures. We also did talk to the EHR vendor, the Informatics Association, the Patient Advocate about the existing measures of interoperability, interoperability sensitive outcomes.

However, even though we align them with these topics that does not mean that they've not provided information on the other topics as well. So, the information was extremely extensive but we did try our best to align them with a particular domain which would be where the main part of the questions would come. Next slide.

The interview question categories for their background on the experience of developing, using and maintaining interoperable systems, best practice implementation interoperability, their conceptualization of interoperability as it would relate to measurements and recommendations for the framework. Next slide.

The themes and relevant findings that we're able to abstract from the interviews, we looked to existing measures use or consider for use, available data sources processes and outcomes enabled by interoperability and implementation of the framework. I think again a lot of you that had done key informant interviews throughout your career, know that one of the things that lot of us do is when we're doing interview we do say upfront that we will attribute the individual with the comments that they make. In that way, they are allowed to speak more freely and more directly.

And so, we said that upfront to every interviewee and they did speak very directly and very upfrontly, and for great period of time which provided a lot of information. So as we go through the information that we were able to gather, we will not be directly attributed in this particular interviewees because we did state that upfront that we would not. Next slide.

So the major themes and relevant findings and then the key informant interviews, next slide.

So we started looking and discuss with all of them about the ways measuring interoperability as affect on outcomes and processes. And really try to look at existing measures that they may currently use. And then, we made a table here we sort of that the core domain of interoperability, the care of the clinical process enabled by interoperability, and then the outcome that was sent to this interoperability.

So one core domain, we were able to identify the interviews as electronically identifying birth outcomes from external sources, such as birth certificate data. The care in clinical process enabled by interoperability with neonatal care and the overall outcome was the identifying outcomes such as opioid exposed babies, which would then be, they allow the development of appropriate treatment protocol.

Another domain was access to pharmacy claims data, which is a medication reconciliation process. And that outcome with this particular individual that discuss this was ensuring the patient or filling and complying with medication orders delivered by their physician.

Another domain with access to integrated clinical and nonclinical data streams, and that was to help identify social determinants of health. And that outcome was identifying a number of things, a number of queries that the one that was highlighted in the interview was identifying the rate of child protection for individuals whose parent have a history of chemical dependency.

And then another – finally, another one was to electronically send and receive summary of care referrals. This is a close loop referral of process enabled by interoperability. This particular outcome the interviewee discuss with identification of eye exams given in the state to help determine future treatments. Next slide.

So then we turn to measures under potential consideration for use, again, focusing on a table very similar looking at the domain of interoperability its process and outcome. One domain that was talked about was electronically

sending and receiving the information across providers and that was mentioned by several interviewees on this as care coordination and care transitions was most often mentioned as the most significant process. And that one outcome, one individual talked about would be long-term care services and support which we do not find in any of the literature that we reviewed.

Another core domain is electronically querying data from integrated sources. Again, relating to the care coordination domain And this particular outcome discuss by an interviewee which to identify the providers. Patient with chronic disease are seen for specific treatments knowing that individual that have chronic disease often don't just simply see one provider.

Another core domain which we found very interesting was incorporating social risk factors, looking at data that might come from the behavioral risk factor surveillance survey as well as other local and regional sources of information in which this type of data is collected. This was for chronic disease management and the outcome that was discussed was very general. But the individual that talk about this had incorporating social risk factors in an outcome sensitive measure is most predictive of the clinical outcome impulse.

And then another core domain was expanding the focus of ambulatory sensitive condition also related to chronic disease management because these particular outcomes would be examining the relationships between two conditions. The one mentioned in the interviewee was the relationship between mental health and cardiovascular disease. Next slide.

And then, the final measure under consideration for use was electronically sending or receiving some recent care. Again going back to a closely referral and this individual talk about a number of outcomes that are sensitive to interoperability that this would relate to such as reduction and hospital phase reduction and readmission, and reduction an emergency department visit. Next slide.

So then we also talk about system-generated data sources for interoperability measure. One data source, one interviewee we mentioned and talked about was what they call a patient-centered data home, wherever the patient live and irrespective of what vendors or type of data is in play. All of their healthcare data comes to rest in their local patient-centered data homes, which then could be access by a provider assuming the patient give authority.

Another system-generated was a provider portal in which providers have access for a monthly claim stream on the patient or attributed to their particular accountable care organization, provide the data to determine a patient who are attributed to them are actually seen those providers primarily or they're going to other emergency rooms or whether or not they have the appropriate medication, et cetera and so forth. So it's giving more insight into how these patients are actually seeing care within the structure.

Another data source was an outbound admission discharge transfer or ADT interface from an ACO registration system with standard data that is received from all of participating physician so they know where their patients have done, where they have left or where they have been transferred to. And then, a program is currently being launch for consumers to request electronic medical records from providers whether they delivered electronically or otherwise. And this particular interviewee he said, "This is within itself could be existing generated data source for a variety of interoperability measures namely in the areas of shared decision-making and also in self management of chronic condition. Next slide.

Processes and outcomes enabled by interoperability, there was a lot of obsession about this with all of our interviewees. They have a number of ideas about this, as I'm sure you can imagine. But one of the ones that came out on top was improving a patient engagement, as there is now a greater ability to access comprehensive patient data, again, not allows for measures of shared decision making in self-management, care coordination and really as one interviewee said, changes the dynamics of communication between a provider and a patient. And if there was a way to measure that and you really log in, looking at a process and potentially outcomes that are affected by interoperability.

Greater efficiencies in care and cost because of reducing items such as duplicate or redundant test and procedures, identifying cost trend and utilization of purposes for patients that has multiple chronic condition. One interviewee we mentioned identification of chronic patients who are high utilizer of specific health services. There is significant values and measures reported a population community or a whole patient level one interviewee said that reporting a singular measure from a singular EHR does not provide nearly as much value as being able to provide measures that talk about the entire patient taking data from multiple sources at community or a population, and how they went so far as to say a single measure from a single EHR is essentially workflow.

Again, another process or outcome or reduction in morbidity, reduction in chronic disease and particularly reduction in emergency department visits. Next slide.

So we did discuss with them, they all agreed. There was general consensus to the framework great idea from which I'm sure ONC and CMS would love to hear. But they did say that there are some realities implementing the framework and there are some barriers the measuring interoperability.

So some of the realities that they discussed where trying to identify common data sets for a standard of collaborative data, agreement on a prioritize set of use cases to improve quality. We did hear you can't boil the ocean more than once. So we really do need to come up with a prioritize set to begin with. So that is something that providers and vendors and organizations can do.

Don't reinvent structures for data integrity, but look at other marker – market sectors who had solved this already, and understand that that will happen through collaboration between organizations.

Another topic that was mentioned frequently is, interoperability is going to continue to evolve overtime, so the framework cannot be static, it needs to be fluid, it needs to be transparent and it needs to be responsive to changes and requirement (data).

We need to reduce the value of measures reported from EHR and a practice again not just a singular measure from a single EHR but looking at whole patient data from community since from population to demonstrate what is not currently working with interoperability, and how the framework can correct those problem, and also tracking patient satisfaction and measures. That is of course the major kind of measurement at the moment, examining patient reported outcome measures and patients satisfaction and in case you experiences of care. Next slide.

So potential barriers interoperability measurement, and I'm sure to all of you none of this is really going to be surprising, these are issues that have mentioned rather frequently, but when we really press on this interviewee to discuss what the barriers would be. Many of them said these things over and over again. The data and information may not be available, there are still lack of incentives to build interoperable system, unclear policy, (legal) governance, a lack of vocabulary and terminology standard, multiple data streams as limited ways to integrate them, lack of data transport and receiving data accessibility by other direct as one mode of transport but there are of course other.

Lack of sharing the basic levels of data such as combining the EHR data with potential registry data, patient identification which was really the big issue amongst everybody, 100 percent credibility that's the right patient records has been accessed. And then data collection, our physicians entering data into systems the right way, if they are not then it becomes very difficult to really measure interoperability and particularly process and outcomes that are affected by it. Next slide.

They did have some recommendations for the framework. Again, they all said unequivocally this was a great idea, certainly something that is needed, but they thought to develop measures to assess and address, steps interoperability, again identified core domains and align outcomes in our process measures for them. Identify the measure gaps and create measures that people will then build systems for. Develop measures that include community reconcile data

prior to visit. Use case assesses all of the pregnancies in the community, all neonates, all end of life, et cetera.

Base future process measures on completeness of record and timeliness of its availability, currently not done. Create a test environment although none of them had any specific about how this would be done. But to create a test environment that validate interoperability since the measure and the data sources that information come from. And again as I stress over and over, prioritize the measure. Particularly prioritize those, that will have the most impact on clinical quality, patient experience and reduce cost be in that order. And so, I think as we move forward with the creation of the framework, that maybe something to take into consideration.

They also talk about the sustainability of the framework, that is important both for the government and for NQF, that's the framework that is produced, sustained and built over time. So how do we make it sustainable? Many of the interviewee said, continue to take input from professional organizations of patient advocacy organization, understand people can trust what's going on and said their data is being used appropriately. Get enough stakeholder buy into the framework, we need enough data and evidence, showing this is at least for better outcomes and reduce cost. And there needs to be a national standard develop by government or government requiring something like MACRA or Meaningful Use even though Meaningful Use is now being rough into MACRA, that if there were some sort of national standard developed for this type of reporting, it would enable it to not only begin but to be sustainable. And we should focus less on access of data and much more on the utility of the data with respect to process and outcome measure as well as performance. Next slide.

And that is it, so I'm happy to take any questions or comments. And if you have any additional comments for Vaishali at this point in time, feel free to ask. Just be clear as to who you're directing your questions towards.

Wow, not a question, really.

Vaishali Patel: So, all right, since there isn't a question, this Vaishali, I have a quick question that relates to what Hans and Julia had talked about, so I think you'd have a point, if I understood it correctly that relates to that. That if you don't mind going back maybe two slides.

Jason Goldwater: You want to go back two slides?

Vaishali Patel: Yes. If you guys can go back couple of slides – oh, maybe this one, yes. So, identify core domains of the interoperability and align outcomes and/or process measures for them. So, in the discussions that you had with the interviewees, is this point basically related to the point that was raised by Hans which is, you know, we basically identify say certain outcomes, that will be a priority for measurement that are sensitive to interoperability, and then kind of go back and align or maybe go forward, I don't know, in terms of how they talk about this.

But then to go back and say, "OK, what aspects of interoperability help enabled – enable this outcome and, you know, this would be the aspects to measure when your trying to assess what are this, you know, this particular outcome that we know is sensitive to interoperability.

So, if you could speak to that, I just – we just elaborate on that first point a little bit in terms of what ...

Jason Goldwater: Sure.

Vaishali Patel: ... the interviewee describe, that would – I think that might be helpful.

Jason Goldwater: So, you know, what they were describing was and they really sort of gets back to the issue that they kept bringing up which is, you have to prioritize, you have to come up with what you – what problem you want to solve first. You can't boil the ocean, I'm sorry to use that analogy there.

And so, what they were saying is what domains, you know, in particular, do you really think are going to be provide the most value in terms of utility and will show the greatest performance. So is it areas that are going to be medication reconciliation or, you know, are they're going to be domain is like

and so population health, is it going to be, you know, lab ordering and testing, is it going to be with medication.

And then specifically, you know, what are the processes and outcomes that would be affected by interoperability. And then what measures are there that we can already use and then what measures they need to be develop. So, you know, they said there's a lot of domains out there that you could be using, and certainly plenty of people have written about those, but if we're going to setup a framework that we want to implement upon completion whether we would like people to start use after completion. And I want to have them continue to use. Then we have to sort of start off with what are some of the core elements that would be the most impactful, what would provide the greatest utility, what would show the greatest performance, what would show outcomes that would be meaningful to both providers and patients.

And so, you know, they didn't say whether you have to serve more forwards or backward, starting with the domain and then going down on identifying the process and outcome or identifying the measure and the outcome of the process and then seeing what domain are relates to, that wasn't discussed. But what they did discussed was, you know, out of all of the potential domains that you could be using which ones really are going to be the one – those that are going to be the most meaningful.

And, you know, one individual just did discuss that there's been an awful a lot of literature written about the many different types of aspects of what interoperability can do. But, again based upon sort of where we are at the moment where we would like to be able to the future, what would be the most sensible in terms of developing measures around or identifying measures around, that would have, you know, the greatest significance or meaning to providers and patients and vendors.

Vaishali Patel: Thank you.

Robert Rudin: So this is Robert.

Jason Goldwater: Sure.

Robert Rudin: Can I just make a quick comment. It sound – I apologize I joined – I had to join in late, but it sounds to me from your result that they are – they are essentially saying that we shouldn't have some kind of framework for understanding the use case first like understand the problems. And then we'd be in a better position to understand – to have a framework for the interoperability which is the solution.

Jason Goldwater: To some extent, I don't think I ever recall any of them stating that, you know, there wasn't sort of understanding of the problem. I think that they, you know, and they wanted to understand why the framework, what the framework was going to do. And when we described that to them, and much the same way Vaishali just did, it was OK, so you want to create a framework that allows you to measure interoperability and its impact on process and outcome of care. There are a lot of possibilities there.

And if you try to develop a framework to cover all of them, you will never get this project done. And more than that, not only we don't get it done but you are more than likely not going to produce something that people will actually use because it will be virtually overwhelming. And in some areas where there's a limited amount of interoperability, it would not be usable.

So, if they're going to build this framework, it's critically important to sort of identify the use cases where you can identify the most value, or can be access – where the committee can identify the most value, where they think the greatest impact will be. And then, are there measures there that are sensitive to interoperability that you can use or is there a gap in which they're going to have build measures too.

And if there's a gap, then identify the measures you want to develop and then people will develop the systems around them. And several of them said, you know, vendors will do, you know, if there is a consensus that there are needs to be use of this particular measure, you know, then vendors will follow along and develop a system in order to incorporate them.

But again, it has to be this consensus that this is a great value, great importance, great impact. What they keep stressing over and over again was,

there's a lot that could be done. Don't try to do every single one. But I think Vaishali was also sort of taking about – in her remark which is, you know, you want to create a framework but this is not going to be the end all, be all of the interoperability measurement. This is just one part of it and in that one part is to, you know, just try to identify which really going to be important to get, you know, if you don't do that it's going to be very difficult to have anyone use this, because they might not understand what the values to that to, you know, their particular organization or patient population visit.

A. John Blair: This is John Blair. Just a couple of comment as I'm listening to all of these, and I think I have too many questions and comments to even get to it all. But I guess my first question is, do you think we're even far enough along with interoperability to be even talking about outcome measurements. I'm surely not convinced we are.

And so, if or not should – and we maybe, but if we're not should we be measuring first interoperability and then usability for those interoperable components.

(Crosstalk)

Vaishali Patel: Go ahead, John.

A. John Blair: Go ahead. Yes, so that's my first question. The second is I'm not ...

Vaishali Patel: Can I address that?

A. John Blair: Yes, OK, OK.

Vaishali Patel: Can I just address the first question, just because it does relate I think to why this kind of ONC embarks on this in the way that it did. And then maybe Jason the second question might be more relevant to you.

But with regards to the scope of this and the timing of this, you know, in the near term, you know, as I mentioned the focus is on this measuring interoperability itself. And, you know, trying, you know, with this project trying to develop, you know, more sophisticated measures of interoperability

that can complement the survey-based measures that ONC currently is really reliant on. And also in the near term the focus is on measuring, you know, does greater interoperability lead to increase availability of information from outside sources of the point of care, into what extent is that information used and as a part of that, you know, we do measure, you know, the usability, you know, perceptions about the usability of the information itself in the providers surveys that we do.

With regards to why, you know, we have enough of a critical, I guess, hear enough of a penetration let's say, of interoperability that even measure its impact. You know, what does framework – what we're trying to do is identify any potential existing measures, should they exist – but I think more importantly what is going to do is outline and help us priorities the key areas based on what we know now as to, you know, where we should be measuring the impacts on interoperability, and it's going to take us time once the measurement framework is develop to actually operationalize that as I was saying.

So, you know, there maybe measure concepts that are identified through this – but there no existing measures. So, it's going to take time to develop those measures to have, you know, really to implement this that could take a few years, you know.

So, we want to get started on that work now, you know, in terms of just specifying what are the key measurement domains, what are the priorities, what aspects of interoperability are important to measure for certain domains, even if interoperability is not widespread yet. You know, and we won't really truly see the impacts of some of that, you know, for another couple of years. At least right now, what we can say is OK this is where going to be measuring, and we're in the process of developing this measures that will get us there. You know, if we identify few existing measures that we can use now. We can – at least start measuring the early impacts of, you know, interoperability and presumably over time, we'll see improvement of that as there's grater interoperability across the ecosystem.

So, that was the rationale, John, for us to like embarking on this now as opposed to say, waiting in a couple of years when say interoperability is more widespread.

The other thing is – to you – I think, you know, there are probably packet to the country where interoperability is occurring. And it would be nice to understand some of the impacts of that. You know, certainly there are number of studies that have been conducted by Rainu, Julia, you know, and the others, Jason, and others were on the call today that have really examined that and have been really provided the evidence that allows us to even look at what areas does interoperability impacts. But to the extent to which we can kind of identify some measures and apply them on a nationwide scale would allow us to identify where interoperability is occurring, where we've seen the impacts and whether we can learn from those communities on how to, you know, best practices and, you know, kind of leverage that on the wide scale.

So, I see a variety of reasons why we might want to do this now rather than wait. So onto your second question, John.

(Crosstalk)

A. John Blair: OK. Yes. Well, this – so just to that. I mean, so that's – those are a lot of things that you discovered. So, I mean, it would seem to me that one thing would be to start to look at this measures in a stepwise fashion. It takes us from now to over the next several years and kind of clarify which are which, because, you know, getting the outcome measures now on interoperability certainly, I mean, maybe for packets and for future reference.

But, you know, are we now going to look at the level of interoperability someone mentioned packets, you know, transactions and stuff. I would agree that's not outcomes but if you don't have the packets moving from place to place, then you have no – you have nothing to start with.

So, one, is it the transaction volume. Second, is it things around usability, not surveys but, you know, are they rendering the documents. Are they doing the reconciliation et cetera, et cetera, because you can measure that, or we will be

able measure those things. And then, ultimately, bubbling up to outcomes for the future or for communities that maybe more advanced.

Jason Goldwater: So ...

Rainu Kausal: This is Rainu. I do think that there are some measures, some of which we've studied actually in the Hudson Valley, John, with you, that the more advance the outcome measures that the more advance community will be able to demonstrate effects on for interoperability. And I think that we obviously need to keep a close eye on the process measures and continue to include those because there are just a select few communities across the country, who are advanced enough to really be effecting changes and outcomes.

Jason Goldwater: So, John, I'll make my remarks brief here. You know, I think you raised a great point and I think that there is a lot of what you said that sort of echoes what the interviewees were saying. You know, I think it's really going to sort of be up to the committee to sort of decide generally how to move forward in a way that sort of meets with the objectives that ONC like to accomplish, but in a way that, you know, realistically would be implemented, more utilized so that, you know, there's a way for ONC to sort of assess and measure interoperability beyond the way they are currently doing it which is, you know, it's – as Vaishali said which is generally through surveys.

So, you know, I don't think that we're going to be able to accomplish everything with respect to process and outcomes and I don't think the interviewees felt that either. I mean, you know, again when we talk about, you know, getting their ideas about measures that are in use or measures under consideration or, you know, possible data sources to generate measures from, when we got out of that and talk about what are the practical realities and implementing those and what are the barriers. I mean, I think they discuss things as you, personally, are probably very well aware of. And I think those are very real.

And I think as the committee starts to build the framework, you know, those are things that have to be taken into consideration, you know, given those barriers, given, you know, some of the problems that still exist with respect to

interoperability and have been persistent for some time. You know, how do we examine the best way of measuring interoperability and its impact on processes and potential impact on outcome in a way that could be usable?

And I think that again comes back to, you know, what are the use cases that would actually work and how do we prioritize those and, you know, what kind of problems do we want to try to solve with the framework first. And knowing, again, it's a fluid document. It's not something that will be static and will be published, and that will be the end of it. It will be something that will continue to evolve over time as we hopefully get pass some of these barriers of interoperability and start doing more exchanging of data, and are able to really evaluate outcomes.

You know, one thing I do want to say is I know we are going to talk about this at the end but, yes, we did publish the literature review yesterday for public comment. That period will close on the 13th of February. And part of that document includes measures that we were able to identify existing measures that corresponded to some of these clinical areas we were able to identify in the literature review. And we are examining those with our clinical staff here and we will be doing that also with you to really sort of assess how (interoperability's) sensitive these are, and whether these are ones that could actually be included in the framework now to sort of again given the current realities ...

(Off-Mic)

Jason Goldwater: ... current dynamics, is there ones that would actually be useful.

So, we are sort of doing this in a stepwise fashion as you've suggested. But really, it will come down to, you know, collectively what do all of you and all of that expertise that you bring, I think we could actually accomplish given again sort of the reality of where we are now, and what – how will the framework again be the most useful, and the interviewees again not ignoring those realities, so that, you know, identifying potential use cases and areas that would be most impactful and could be done is something that would be the best way to start.

Any other questions?

Terrence O'Malley: Hi, this is Terry O'Malley. This is a comment again, building on John's comment. My sense is that these are great measures but they are so complicated and the requirements – the technical requirements, the standards that need to be in place, the processes that have to be refined and put into place to create the sort of high level outcome measures that we want. In the exchange of a reconciled care plan, we could break that down into about 50 different pieces.

Jason Goldwater: Right.

Terrence O'Malley: I mean, it's just a complex process.

Jason Goldwater: Right.

Terrence O'Malley: And yet what we're missing are the really fundamental building blocks of what do I need to be able to exchange information with you in a way that you can reuse it efficiently and effectively. And that's going to be a standardized vocabulary, you know, semantic standardization. There's going to be a transport standard involved. And if we don't build up this infrastructure kind of one piece at a time, we're never going to get the people who don't have that infrastructure engaged in the process of interoperability.

So I would – I think there is a place obviously from parallel approaches but I think if we ignore this lack of infrastructure, we're doing that at our peril because there won't be anybody exchanging anything except for a few. Anyway, my comment.

A. John Blair: Yes. Yes, this is John again. I couldn't agree more with that. As part of what I'm getting at, there are – there are two – there are steps along the way that you have to complete before you have a large scale nationwide interoperability. So, I mean I guess you could have a piece of this being outlined in half a dozen measures that will get you there. And then another piece is looking more at outcome for the advance areas that could – well, that would be applicable and would be ready for our future state.

But I mean, if you're looking a large scale, broad interoperability, you've got to get at the transaction volume and then you have to get it usability to even have the situation where you can change those or you can at least facilitate those clinical processes that will give you those outcomes.

Vaishali Patel: So to address both those points, this is Vaishali, you know, the scope of this work is focused on advancing the measurement of interoperability itself. So, you know, actually activity and, you know, that would include like, OK, do we want to, you know, assess whether transaction volume measures like, you know, are appropriate for, you know, advancing the measurement of interoperability as compared to some of the survey-based measures or complementary to survey-based measures that we use that could include the usability aspects that you talked about, John.

But in terms of like the preconditions or, you know, the enablers of, you know, the infrastructure that you need in place to enable interoperability, these building blocks, that is a whole other scope of work that another project is addressing. And so that's not part of the scope of work of this particular, you know, initiative because that's just too much, you know, the scope – that scope is just too huge to be able to do all of that.

So that's why this scope of work is limited to really advancing the measurement of interoperability itself to see if we can identify system-generated measures of interoperability which would include things such as transactional volume perhaps and then looking at the downstream impacts on care processes and outcomes.

And there's another project as I mentioned that – and other – you know, other efforts that are in place to look at, well, you know, the – like I was saying the strategies to enable interoperability, are these incentives aligned, are the, you know, the standards in place, are the, you know, the patient matching the provider director, all those pieces of infrastructure. That aspect of measurement is another scope of work and not part of it.

Now, if folks have suggestions on what else ONC should be measuring, I am – like I said, I'm totally happy to, you know, welcome that and – but that's not going to be added to the scope of work, that there's already a lot that we're undertaking here and that could be incorporated as part of other projects that we have underway that I haven't really gone into here because that's not, you know, the purpose here.

But I do want to, you know, reassure folks that, yes, you know, those building blocks are critical in measuring whether those building blocks are in place to enable interoperability is something that we think – you know, ONC thinks is important to measure and we're developing a strategy for that as well but – which is being done in parallel. It's just not the focus of this particular group's work.

A. John Blair: Yes. Yes, I'm not saying that. I wasn't – you know, I wasn't talking about additional building blocks. I think you have ...

Vaishali Patel: Well, someone else just mentioned it, so yeah.

JohnMarc Alban: OK, all right.

Vaishali Patel: Yes.

Jason Goldwater: OK. So if there are no more questions, are there any more? You have just a few minutes.

All right. With that, I'm going to turn it over to Poonam (and here) to talk about the next steps.

Poonam Bal: OK, thank you, Jason. So what we had already touched upon, so the Environmental Scan Report, the draft report is up and posted for public and member comments. It was posted yesterday, January 31st, and it will be posted through February 13th. And so definitely take a look. We will also send an e-mail just connecting you with the link to that document if you don't already know where it is on the NQF public website.

And then next – the next web meeting with the committee is scheduled for February 28th, and that will review comments and initiate some next set of activities. Jason touched about – touched upon a few of the items earlier but also talking more in detail about the measures review. So we will keep you and the whole committee be posted on the upcoming activities associated with that.

And then finally the in-person meeting is scheduled March 21st to 22nd. You should all have it on your calendar. It will be taking place at NQF in D.C. So feel free if you have any questions, you should all be contacted soon, you know, as far as any travel and hotel accommodations. But if you have any questions, feel free to reach out to us as well.

Female: So all just for clarification purposes, we obviously have many more meetings that you have on your calendars for the duration of the project. We're going to focus on these upcoming steps since they really focus on getting the background work done, finishing off the Environmental Scan and finishing off the key informal interviews, taking those themes and moving them forward. And in-person, we really start shifting more towards the actual framework and what it will look like and taking what we've learned from these other kind of background building items and seeing what we can move forward.

Poonam Bal: OK. So if we can just move forward, if the operator can open up for any public comments be it still on the phone or in the chat.

Operator: During this time, if you would like to make a public comment, please press star then the number one.

And there are no public comments on the phone line.

Female: We do have on the chat from (Tammy O'Collin). The comment states we are concerned with data blocking and certain EHRs refusing to work with registries. Can you speak to the current data blocking issues and (in relation) to free up data transfer? I think this may go beyond the scope of this project. So, Jason, did you want to say anything beyond that?

Jason Goldwater: That is not part of the scope of this contract. Vaishali, I don't know if you want to talk about, you know, very quickly if this is being done with some other contractor or this is something ONC is looking at. But this is not the scope of this particular work.

Vaishali Patel: Yes, that's right. You know, we are putting in place the strategy and measure, data blocking and I'd be happy to follow-up with, you know, whoever it was that asked that question to provide more information, so if you want to just send me an e-mail, then that'll be great.

Female: OK. That's the only ...

Jason Goldwater: OK.

Female: ... at this time.

Jason Goldwater: Is that the only public comment we received? OK.

Female: Yes.

Jason Goldwater: OK, all right. Well, if there are no more public comments, again, the e-mail and phone number for this project are listed. Our project page and SharePoint are also listed. We obviously encourage all of you to please if you are able to take some time to read the Environmental Scan Report, to offer your comments and we will be receiving comments I'm sure from the public that we will dispose and be able to – or depose rather and be able to discuss those with you on our phone call at the end of the month.

We want to thank you all very much for your time and thank you for what will be your future efforts in this regard. Thank you for all of your insightful questions and input today. We greatly appreciate all of your efforts.

We want to thank Vaishali very much for her slide presentation this afternoon as well. I think that provided a lot of needed clarity on the scope of work and I think certainly provided some directions for the committee moving forward. So we thank her for taking the time out of what I'm sure is a busy schedule to do that.

Thank you all very much. We look forward to speaking to you all soon. If you have any questions, you know how to contact us. Have a great rest of the day and great rest of the week.

Vaishali Patel: Thank you.

Male: Thank you.

END