



**HIT Standards Committee  
HIT Policy Committee  
Joint Meeting  
Application Programming Interface Task Force  
Transcript  
December 4, 2015**

**Presentation**

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Thank you. Good morning everyone, this is Michelle Consolazio with the Office of the National Coordinator. This is a meeting...this is a joint meeting of the Health IT Policy and Standards Committee's API Task Force. This is a public call and there will be time for public comment at the end of today's call. As a reminder, please state your name before speaking as this meeting is being transcribed and recorded. I'll now take roll. Josh Mandel?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

I'm here.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Josh. Meg Marshall?

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Hi, Michelle, I'm here.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Meg. Rajiv Kumar? Leslie Kelly Hall?

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

Yes, I'm here.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Leslie. Aaron Seib?

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Present.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Aaron. Drew Shiller?

**Drew Schiller - Chief Technology Officer & Co-Founder - Validic**

Yup, hi, I'm here.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Drew. Richard Loomis? I believe Richard is on. David Yakimischak?

**David Yakimischak, MBA – Senior Vice President, Information Systems - Surescripts**

Here.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, David. Aaron Miri?

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

Here, good morning.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Aaron. Robert Jarrin?

**Robert Jarrin, JD – Senior Director, Government Affairs – Qualcomm Incorporated**

Here.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Robert. Ivor Horn? Linda Sanches? And from ONC do we have Rose-Marie...?

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

I'm here.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Rose-Marie. And Jeremy Maxwell?

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

Hi, Michelle.

**Jeremy Maxwell, PhD – IT Security Specialist – Office of the National Coordinator for Health Information Technology**

Hey, Jeremy's on.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Jeremy. Is Lucia on as well?

**Lucia C. Savage, JD – Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

I'm here, Michelle. I'll be on mute.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Okay; hey, Lucia. Anyone else from ONC on the line?

**Ivor Horn, MD, MPH – Medical Director, Center for Health Equity – Seattle Children's Hospital**

Hi, this is Ivor.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Hi, Ivor; thanks for joining. Okay, with that I will turn it over to you Josh and Meg.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Hi, great; thanks Michelle. This is Meg Marshall. I hope everyone enjoyed a nice week since our last call and are ready to dig in to today's agenda. We are going to hear from Task Force Co-Chair and renowned API expert, Josh Mandel. He is going to present an overview on APIs and include a live demo for us. We're also going to hear from Task Force member, David Yakimischak; David provided some really great thoughts earlier this week on API privacy and security considerations that we think will be valuable for the group to hear him discuss first-hand.

And then after that, if there is time, we will begin discussion on topics and questions for the January hearing by reviewing the straw man outlined in that set of slides. So great agenda, looking forward to the discussion; thanks for joining. And with that, Josh, if you are ready, I will turn to floor over to you.

**Richard Loomis, MD, CPC – Senior Medical Director & Informatics Physician – Practice Fusion**

This is Richard Loomis, I'm back on the call, I had dropped briefly.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Hey, Richard.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Perfect. Okay, let me see if first I can do this amazing feat of sharing my screen, and with any luck, you guys can now see something that looks similar to the slides that we were seeing a moment ago.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Ahh, we don't see it, at least I don't. It's just a black screen.

**M**

I got it, I can see them.

**Lonnie Moore – Virtual Meetings Specialist – Altarum Institute**

Yes, we can see it.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

I see slides, yes.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Okay, it's just me then. Oh, I see it now; sorry, I have a slow computer, I'm sorry.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Great. All right, so I have an interesting task ahead of me which is to try to provide an overview of what APIs are to a renowned group of all of you, my committee members and, you know, I think there's a lot that I can tell you that folks already know and so what I'll do is just to share some sort of opinions and perspective and if you'll indulge me, I'll throw in a little bit of personal narrative. But really just try to frame a set of discussions that I think can inform our subsequent deliberations here.

So I'm just going to jump right in and talk a little bit about what an API is, why we need APIs, some cases where we really don't need APIs perhaps and I'll try to show some examples and get a little bit concrete and talk about where some APIs are used in the real world. And then I'm going to try to address the issue of where healthcare APIs are being used today, although as we'll get into, we don't have a really comprehensive way to analyze the current state of affairs and I think that's actually an interesting point and we'll make that point explicitly.

But let me first dig in with kind of a working definition and this is sort of a definition that I use when I'm describing what APIs are to a set of public health students, for example, at the Harvard School of Public Health. So what is an API? You know, broadly speaking an API, an application programming interface, is a way to give software developers a well-documented and supported and useful way to build programs.

And so if we look at this definition, we see that APIs are tools for programmers and they're tools that help programmers to customize products or to integrate products together. That's a sort of an abstract definition and I'll share, again if you'll indulge me, just sort of a couple of stories from my personal experience to try to talk about what API-ness is.

So I'll start with something you could look at either as an analogy or as a very real question, let's work sort of totally outside of the software domain for a minute and just talk about a doorbell. So a doorbell is a system that you might have installed in your house or your apartment building and it helps you do a certain job. It helps you to let people in to your house or your apartment when they arrive and everybody sort of understands the protocol. Somebody down on the street or at the front door presses a button and then you hear it and maybe you could buzz them in by pressing a little buzzer that you have inside your apartment.

And that works really well, but maybe you're having a party and you're going to have guests arriving throughout the evening and every time somebody arrives, maybe you don't want to be interrupted and go and press the button to let them in. So, you can imagine the different system where you could just give guests sort of the passcode ahead of time and they would enter their secret passcode and they would be automatically admitted, and that would be really convenient.

And it's not beyond the realm of technology, but if you live in an apartment building where you've already got this doorbell installed, the doorbell doesn't really work that way, the doorbell was installed in the 1970s and it has wires going throughout the walls and you didn't pick the system, the system is just there. And you don't really own it because it's shared maybe by your apartment and a bunch of other apartments. So you could imagine a better way that it could work, but you're pretty much limited by the system that's installed.

And so in the absence of any APIs or any explicit tools, what can you do? Are you stuck with a doorbell that works the way that it came or actually do you have some power to customize it? Do you have some power to integrate a new interface? Can you teach an old doorbell new tricks?

And this is a picture from my apartment from San Francisco from a few years back, and the answer is, that yeah with a soldering iron and with a voltmeter and maybe a weekend of hacking and an Arduino and some C-code, you could actually augment the doorbell and you could make it do new things like listening for a special pattern of knocks and maybe only when somebody enters the secret knock (knock, knock, knock, knock, knock, knock, knock, knock), then you'd recognize them as a trusted guest and you'd let them in.

So, but this was a fun project, but it was an incredible amount of work to make a doorbell do this thing and at the end of the day, what I had was a pretty fragile system. I had cobbled it together myself; I made it work, but it's not exactly something that I could go and offer to my neighbors or sell on the market. And three months later when somebody else replaced the doorbell system downstairs, my whole thing broke because it depended on a bunch of old infrastructure that was no longer supported.

So this is sort of a story of integration that you can do without an API, without any official support and it's not that you can't build a system that works, I mean it worked, but the problem is about maintainability and scalability. And so APIs are designed to address those concerns to give you an official way, a well-supported way to customize and to integrate the environment that you work in. So that's sort of an example from the doorbell domain.

I'll give you an example from the healthcare domain. An API is a system that lets you transcend, let's you go beyond just having one right way to do something, one right way to build a user experience. So this is a set of Google search terms for electronic health record vital signs, screenshots. And you could do this for many different concepts, but if you just sort of browse the imagery that you get here, you'll see a number of different commercial and homegrown and open source EHR systems that people have taken screen shots of and you can see they all sort of do vital signs a little differently, some of them maybe look a little friendlier, you like them better; some of them look more antiquated or maybe they're harder to use, but there's a whole mix of technologies here.

And I can say, when I was a medical student and I was responsible for putting together a set of vital signs for all the patients on a hospital ward, we had a manual workflow. It was a ton of work to copy values by hand off of the computer screen and onto paper so that we could do morning rounds. And it's the kind of thing that you could automate with a computer program. You could build a different user experience on top of the electronic health record system.

And act...I did that as a surgery...during my clerkship in medical school and it was a lot of work. But at the end of the day, I built a system that would automatically copy the vital signs out of the EHR, but again, there was no API for it. So it was a lot of manual effort and it was fragile, it wasn't well supported by these systems. But an API gives you a standard way to do it so that when you want to access a set of vital signs or you want to know, which patients are currently on the surgery ward; you have a well-defined way to do it.

And when you build your software using an API, you have some degree of assurance that that API will be stable and available to you over time and that when it breaks, when something behaves differently than you expect, there is some sort of agreement from a vendor that they're going to support it and that they're going to help you, in some way, to keep it up-to-date. So, that's a little bit about doorbells, a little bit about EHRs and I'll talk just sort of in rough terms about what APIs do and how they work. I like to think of an API as a contract, and it's a contract in terms of technical details and also sort of in terms of legal and policy and contractual detail.

So on the technical side, an API is a contract because a vendor says or the API supplier says here's what you give me for inputs and if you give me these inputs with the right syntax, I'm going to provide you these outputs with a certain syntax and with certain meaning, with certain semantics to the data. And so it's a contract in the sense that you could always ask for a user's location or a user's medication list and you're going to get back a well-specified payload; you know how it's organized, you know how it's coded and you're going to be able to write an algorithm, a piece of software that's going to use it over and over again and it will always work the same way.

And then on the policy side, you also have contracts; you have a set of terms and conditions. You have a set of terms and conditions. You have to make certain representations or promises in order to get access to the API. Maybe you have to promise that you're going to preserve and protect the privacy of the data that you get.

You might have to agree that you're not going to make a certain...more than a certain number of requests per second, so you're not going to overload the resources of the system that you're querying, and maybe have to give consent to have your data used in a certain way reciprocally and maybe there's a service level agreement so the API provider says, we guarantee that we're going to have more than 99.9% uptime and that we'll be able to respond to your queries within 300 msec.

You know, there are all kinds of details that you could build in sort of on the service level side. But if you zoom out, we see that an API is really a set of promises. It's a covenant between somebody who wants to build an application and somebody who's providing supporting materials to make that job easier.

So APIs are used in really diverse situations. You could have an API that controls a device like a doorbell or a webcam. Or you can have an API that provides access to something a little bit less tangible like information in your bank account or your contact list or your Facebook profile or your healthcare record; so APIs that provide access to data. Or you can have APIs that provide access to information about who you are; your identity or your preferences for sharing. You might think about it as a class of data or you might think of identity as a separate kind of information that you're providing access to; but APIs could be used to expose all these kinds of things.

And then there are many dimensions on which APIs can be designed in various ways. So if you think about accessing data, you could design an API that works using a push methodology so that when new data are available, they're automatically sent to you or maybe you could do it in a pull methodology so you just ask for the data every time you're interested in knowing what's new. You could have APIs that work either way.

In healthcare we talk a lot about APIs that do read only where there's one side that's providing information and the other side is just consuming it. Or APIs that handle read/write where a client can not only read what data are in the system, but can create new data in the system as well, so interact in both ways. So that's just a couple of dimensions on which we think about these APIs breaking down.

And then I think it's fair to say that when it comes to the design of these APIs, there are lots of flavors, there are lots of ways to build a design. So some are really for low level systems programming, so like the Linux kernel APIs that I linked to from here will tell you in great detail how to subscribe to clock events and how to read from a file system or a block device, you know they're oriented towards system level programming.

Or we can think for data APIs; especially we look at web APIs where you're accessing information services over HTTP either over the Internet or over an Intranet. And then within that category of web APIs there are various sort of flavors or styles that you could use. So I picked out two styles of flavors here; there's SOAP APIs, which are a style of web services that was an acronym for Simple Object Access Protocol, a way of saying giving you some inputs and getting some outputs.

Or another common method these days is a REST or a REST-like API that represents information as a set of resources on the web that you can perform certain operations on in order to manipulate the state of a system that you're connecting to. So that's sort of a little bit about the architecture of the APIs themselves without getting into many details. But minimally an API is really a specification, it's a document saying, you give me these inputs, I'll give you these outputs. Here are the side effects that will happen when you make this call. The API specifies all those things.

In the real world, the specification is important; without a specification, you can't really get anywhere. But most real world implementations take more than that. So first of all, they come with documentation, they come with human-readable paragraphs of text, hopefully they're embedded with examples and support...that show you how to actually use these APIs in the real world.

And then most successful APIs also come with a little bit more, they come not just with code samples, but they come with client libraries, they come with tools that you can use in a number of different programming languages so you don't have to start from scratch every time you want to make an API call. So you might get a JAVA package or you might get a JavaScript module or anything in a number of languages that's going to help you get started right off the bat.

And then some kind of support, whether it's a telephone line where you call with questions or more commonly, a web-based support method where you can write in questions and maybe there's a whole community of people, not just the API providers but a community of users just like you who can provide feedback on your ideas or help answer the questions that you have about what you can do with the API or how it works. So, APIs in this sense are actually part of an ecosystem of support tools; the specification doesn't just live on its own, it lives in an environment.

I'll say just a few things about how you protect APIs, but this of course is a really important topic for our workgroup here. So, for example, some kinds of protection are explicitly communicated to the App. So if you, for example is building an App, you know before your App is able to access data, it needs to authenticate an end user. It needs to know who the user's identity is or maybe the end user actually needs to give you permission, needs to authorize you to access data. Well as an App developer you know you have to do those steps before you can actually get any data, and so that's explicit; if you don't take those steps, you just won't get anything back. You won't be able to make the API calls.

Or for example you could have an explicit rate-limiting scheme; say as a client you try to make too many requests too quickly, you might get explicit feedback from the server that says, "Hey watch it, you're approaching our limit or you've gone over the limit and you need to wait for 10 seconds before you can make another call." Or maybe you get a message that says, "Sorry, you've been locked out and you need to contact our system administrator before we'll re-enable your applications key. So those are sort of explicit ways to control access to an App that the App developer actually knows about.

But then there could be a lot of implicit or behind the scenes protection as well. And I think we see this in our consumer lives when we access things like Gmail or Facebook where these companies like Google and Facebook have a whole bunch of algorithms running behind the scenes doing things like logging and auditing access, who has signed in to your account, where did they sign in from, looking for unusual patterns of activity.

And this looks a lot like fraud detection in the credit or financial transaction world, too. If we spot a pattern of access that seems suspicious or simply uncharacteristic for you, we might ask you a question, we might just take an action and say we're going to lock down your account, we're going to suspend access until we can reach a higher level of certainty that everything's okay, that your account hasn't been compromised.

And I describe this stuff as implicit because you don't know it's happening, it's just occurring in the background and you might just learn about the result when something interesting is flagged. And the thresholds for these kinds of decision can be dynamic; they can be developed through machine learning algorithms or through a neural network so they can be programmed in to very precise levels.

And in some sense, there's a lot of custom knowledge, there's a lot of black magic that can go into the way that these kinds of protection are done so they're both really important, but they're also behind the scenes and can be hard to understand everything that's happening until you see just a little bit, the tip of the iceberg about what the output or the outcome of that process looks like. So that's just a little bit about how to think about the way these APIs are protected.

And the last thing I'll say in terms of API structures is that, I said that APIs are a contract; another way to say that is that APIs provide an abstraction barrier. They give us an abstraction around a set of services that we can talk to. And we don't have to know how those services work under the hood; so in the EHR world, that might mean that I don't need to know whether a Cerner system uses a...relational tables or an ethics system uses a MUMPS database under the hood if all I want to do is get a list of overnight vital signs, I shouldn't need to know about those differences and APIs give me an abstraction barrier to just talk in terms at a higher level, that I can understand, that are relevant for my domain.

And so you can use an abstraction barrier like this to support a number of different kinds of architectures under the hood. So for example you could have a bunch of micro-services, little APIs that each do a small job and an individual application might access dozens of these micro-services and assemble their results and responses into a complex workflow to help a user get some job done.

Or another kind of common pattern that we see out in the ecosystem is somebody might build what's called an API gateway, so one place that a bunch of applications talk to and that gateway, under the hood, talks to a bunch of internal sort of goods and assembled things, but puts them together in a consistent way and at the level of that gateway, you can apply things like auditing and logging and security policies and rate-limiting and so it gives you one consistent place where you can do a lot of Apps sort of business process and logic.

And these things can be combined; you can have an API gateway with micro-services behind it, you can mix and match these components. And I won't say much more about the architecture other than to say that the discipline of using APIs allows us to go and build a lot of this stuff in a very clean and reproducible and testable way. So that's like a rapid-fire overview of a few sort of hot topics for me and I appreciate your indulgence in me taking you through a few examples.

I'm going to switch and talk a little bit about the healthcare API landscape as we understand it today and maybe show you a couple of quick examples. But before I do that, are there comments or questions about sort of the general overview that I gave about how I see APIs as being used and useful?

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

This is Aaron; I think it was great.

**M**

Thanks Josh, so do I.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Thanks guys, any other sort of comments or questions about the material? All right, let me forge ahead. Just talk a little bit, one of the things I was hoping to do was to include in this talk sort of quantitative comprehensive overview of the current status of APIs in healthcare systems; so whether it's electronic health record products that have APIs built-in or hospitals or healthcare provider organizations that expose APIs for their clinicians or for their patients.

But I found when asked some of the support staff for this advisory committee to help me with that research, there really aren't good databases, there aren't good collections of information today that are available to help answer some of those fundamental questions. So when you try to gauge the current state of market adoption, it's hard; there's not a single catalog or a list that can answer these questions for us out of the box. And on the one hand actually that's interesting in its own right that that information alone tells us a little bit about the state of the art or the state of the ecosystem.

But I can sort of spin it around and say; well at least we can start reasoning from some examples. So for example, you can do a web search and you can find some interesting things that are sort of generally in this category. And I'll apologize up front for not being comprehensive, and I'm sure that there are dozens or maybe hundreds of products that I've left out of my bullet list here with only four things but again, I'm just trying to reason by example here, since we don't have a good catalog.

But just sort of browsing the web you find things like the Athenahealth Marketplace, you know, where they advertise integrated Apps and they give you a way to browse through a catalog of these Apps that have been integrated with their EHR. And under the hood, it's APIs that make this kind of marketplace possible. The developers of each of these applications are accessing a set of services; said APIs that are provided by the vendor and these APIs do anything from handling scheduling to accessing clinical data in the system. And you get a sense of the kinds of things that people are building just by browsing through the Apps in this marketplace and looking at what they do.

Cerner has something called the Cerner Store, which is also sort of out there on the web that anyone can browse. And again, same kind of general layout here, you can explore a set of these Apps and there are some bundles of Apps that come together as a package and you can just sort of click around and see the kinds of things that people are building. And again, under the hood there are APIs to support the integration of these Apps.

Epic has maybe something called App Exchange, it's not actually clear what it is, there's no public materials about it but even just in the URL of their sandbox it's...there's an App Exchange...here which suggests that maybe that's a piece that's in the works. We don't know much more than that today in public.

Greenway has something called a Health Marketplace; again, just to give you the sort of flavor of what we're seeing out there in the vendor community today. And they've got built-in things like reviews so you can go and see how many ratings each App has and start to get a sense of which are the more popular tools or maybe which tools are new and nobody's looked at them yet.

And there's not a huge number of things in these environments, it's not like going to the iTunes store where there are hundreds of thousands of Apps and lots of content to browse through, these are typically very curated collections and every App that you see in these lists tends to be the result of, you know a more or less tight kind of partnership between an App developer and the EHR.

And there's an open and interesting set of questions for me is how much work did that integration take? And how much testing had to happen before these Apps could become available in these stores or marketplaces or exchanges? There are a lot of unknowns here.

That's a few sort of reasoning by examples. And what I wanted to do was show you a quick demo of the SMART API, which is a project that I've spent most of the last five years working on and I'll just show you from two perspectives. I'll show you our developer documentation to give you a sense of what I mean when I talk about building up an ecosystem around the API.

So this is an example of our documentation website where we say, the SMART API gives you a technology stack for building health Apps. And we have some examples which we try to lay out very clearly and very cleanly what these APIs do and how you'd use them and what they're made of. So we say, we use open standards under the hood; we use FHIR and we use OAuth 2 and we use OpenID Connect and we let you build Apps with HTML5. So we try to provide an at a glance view of how things work.

And then we also provide some detailed tutorials. So, for example we have a tutorial if you want to build an App that runs in the browser, and we'll take you through step-by-step, you know, step 1 you have to include our client library, and so we provide this library with built-in tools that you can use to start querying for data. And I won't go through any of the details of the tutorial, but I just want to give you a sense of the kinds of materials that we make available; sample code, client libraries and then a Google Group where you can go and ask questions if something doesn't make sense. So this is what we mean when we talk about building an ecosystem around the API.

And then I'll just show you very briefly, we have a gallery where we host Apps on the web, [galleries@smarthealthit.org](mailto:galleries@smarthealthit.org), and some of these are open source Apps that we've built in my group at Harvard. Others are Apps that have been built by individuals out in the ecosystem; some of them are commercial organizations that are looking to sell these Apps to hospitals and to clinics. Some of them are patient groups who are looking to build tools that patients can use. So for example there's an App in here that helps you figure out how much your medications cost and where you could shop for them differently. Tools that help you visualize your risk of getting a particular disease.

One of these Apps, for example here's one that we have deployed at Boston Children's Hospital and its job is to visualize data from the EHR. So what it gets is a structured set of blood pressure data along with some basic demographics about a child, so how tall they are and how old they are and the child's gender and it uses those to calculate blood pressure percentiles. Because it turns out that to diagnose high blood pressure in kids, we don't just use static thresholds the way that we do in adults, but the thresholds actually change based on how tall a child is and how old they are month to month.

So our gallery comes with a way to sort of try these Apps out and you can see what happens when they run on some sample data; so no protected health information here, just some synthetic and some anonymized data. But you can start to try these Apps out, see how they work. And you can even peek under the hood to see what they're doing; to see the API calls that they're making when they run.

And again, I won't take you through this in any detail, but I'll just say that using the built-in developer tools in the browser, we can see here's an App that just made 3 API calls. It first asked for patient demographics and it got back this FHIR resource showing who the patient is and how old they are. And then it asked for a set of blood pressures and height, and again it got back a set of FHIR resources showing me, for example each observation, when it was made, what the LOINC code was and what the value was.

And then it gets back a list of encounters, so it knows when a blood pressure was measured, whether it was done as part of an inpatient encounter or an ambulatory encounter. And so that way it can provide filters for the user, who might want to see outpatient blood pressures only and not pollute the data with a set of inpatient or emergency room values that were captured.

So under the hood, all this stuff is being driven by an API and by structured data, these kinds of contracts that I talked about. And then people can start to build all kinds of different user experiences on top. And we're starting to see a pretty broad scale adoption of some of these tools, especially when it comes to accessing the kind of basic structured data that we expect to find in the Meaningful Use context. The kinds of things that go into the common clinical data set, and as Aaron pointed out on the last call, the boundaries there are sometimes fuzzy, but there's a pretty good core of content that everybody understands unambiguously belong in that common data set. And even just with that core of content you can start to build some really powerful and innovative tools.

So it's fun for me to watch the gallery growing and see sort of from day to day as new Apps are submitted by folks that might never even have contacted us before, sometimes the first word we hear about a new App is just that it showed up in our gallery.

So again I appreciate your indulging me for the demo. Let me switch back to just a couple of closing slides here because as we were trying to put together this more quantitative view that I would have liked, and we realized that there wasn't a really good structured source of data, Meg pointed out that we had an opportunity here, which was actually to try to do some outreach. To try to put together a survey to collect a little bit of the data that we'd want to have here.

And so Meg has a position within the EHRA where we could potentially share a survey with EHRA members and ask, you know, a detailed set of questions, without going overboard, to try to collect the kind of information that would be powerful to have in a catalog and can help us influence some of our decision-making and some of our advice at the same time. So this is something that we wanted to bring to the group as an activity that we could undertake, putting together a survey, hopefully brief, but tailored to be informative for us and also as a more general resource.

So I've got a slide here with the kinds of questions we were thinking that we might want to ask, things like asking each organization whether they offer APIs and how they make them available to third parties. Who are the users? Are they patients, are they clinicians? What are the terms of use, whether particular terms around privacy and security or are there other terms that are covered here? Have you actually put these APIs into production or are they more of just an idea that you were thinking about or prototyping or piloting? And then, have people actually built tools on top of these APIs? Do you have a catalog? How are they installed? Are you charged for them? What's the sort of way that you structure how much you charge? Is there a third party who's responsible for certifying that an application is okay in your environment? Or other specific concerns about security and privacy.

So this is sort of a grab bag of candidate questions, but...

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

Josh?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah, please.

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

This is Leslie and I have been asking a lot of these questions to people as well and I've added one and that is how many people that you do business with that you're using an API with them? Because it really turns the question around. We seem to be fearful of this but yet in healthcare we use others APIs all the time. So I think it would be important to just get that scope; this isn't foreign territory, it's just a new foreign application for us.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

I think that's a great point, Leslie. We're all sort of on both sides of these exchanges and, you know...

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

Yup.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

...and it's very hard to characterize who's offering what services today, but I agree, that puts things in a very nice context for people and makes them more comfortable when they realize that, oh yes indeed, they do consume these services on a routine basis.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

And Josh, just to step that up one degree I guess is, you know EHRA has a certain association membership type, maybe NATE could echo this survey to the folks that work mostly in the consumer-facing space to see...I would probably add some of the standards that you referenced when you did your FHIR summary as well. Are you ready to use OAuth 2 in your application...?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah so...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

...support for this and that?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Two great points and ideally we would put together a survey that would indeed EHRA specific, but EHRA has a mechanism that would help us share it with a broad audience, that's great and NATE has a mechanism that's equally great.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Yup, happy to do it.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Other thoughts, comments about in general, is this something that we should undertake and if so, what should we be asking?

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

Maybe ask, what's holding you back?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Great; yes.

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

And what opportunities do you see? Because when it's demystified, it's amazing how many people just immediately gravitate to this.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

You know Josh it's the end of the year here, maybe it's a question of, what are your plans for, you know, I'd like to have some open-ended questions if we can; what are your plans for 2016 and roadmaps in the future with regards to APIs?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Cool, yes. Other thoughts, comments?

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Hi it's David Yak.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Go ahead.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

What I wanted to mention was, are we gathering this information to actually try to get an inventory or are we really just trying to get a representative sample so that it will inform our pro...you know, our decision-making on this particular workgroup? I suspect it's the latter, but I just wonder what the intent of the breadth of information is that we're thinking of getting.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah, I mean I could say my personal sense is that there's value in getting a good, representative sample using the method that's pretty wide open so that anybody can participate in it and just going through the exercise of working out the kinds of questions we want to ask. I think if we got a representative sample here, it would help inform what could be a subsequent more broad scale effort to try to create the whole catalog.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Yeah, good, good. Well the other thing just to mention is, I think there's a little bit of a selection issue here in that the organizations who respond are those who are typically already in the know and we do want to also make sure we sample those who are not. And we'll have some selection bias if we're not careful about who responds to...to an open request.

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

Yeah I would think you would want, and this is Aaron by the way, I would think you want to sample every certified EHR out there, regardless if they're mainstream or not.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Yeah I mean that broadens it out to quite a huge number of respondents; I guess I just wanted to ensure that we're hitting those in the crowd who don't participate or aren't aware.

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

And we identify them clearly, so...

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Yeah.

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

...I mean, I think it's important. Also I would say though, and this is me speaking from the hospital perspective, the question I would also ask is...of the EHR vendors, do they offer any assistance to their customers to develop or utilize APIs in any custom manner? There are a lot of vanilla vendors out there that stick to vanilla and will not even consider strawberry or chocolate or any other flavor so I think that's important to note as well.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah, that's a great point.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Josh, this is Aaron; just curious in other industries, is there this type of registry or inventory typically done? I was going to try and relate it to the doorbell metaphor, but I couldn't figure how to put it into that.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

So I guess the answer for me is, I don't know.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Right.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

And the perpetual question as well is, do we have a structural difference in the healthcare world, you know, is healthcare different from the financial world, for example? We have a lot of folks working on the hypothesis that we're going to have these standards and a standard API that works within different environments. And we don't have a perfect analog for that in other industries.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Right.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

But I can't point to an example of many different API providers all exposing the same APIs in a consistent way on top of different databases. The closest that I can get there is...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Yeah.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

...some of the single sign-on APIs. So tools like OpenID Connect that provide access basically just to the question of "who are you," and they have a standardized way to communicate your first name and your last name, your nickname and your e-mail address; that's the closest example I know and it's a very thin slice of data.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

A very...

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

Yeah this is...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

...different domain that I'm familiar with that has something along those lines is APIs to military parts components that different NATO nations share, but that's a very distal.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Hi, this is Yak again. There's a person I know who runs a company called API Science and he's made a business of trying to inventory all of the APIs on the Internet that he can find. One suggestion would be, I could contact him or we could look for other similar organizations and see if there's someone who is interesting in running a registry for healthcare APIs, somebody who would be, you know Open Source, independent and he has a review criteria and a way of categorizing them. So, that's just one thought; we might want to look for organizations who are already doing this in a broader domain and see if there's someone who wants to do this for healthcare.

**Drew Schiller – Chief Technology Officer & Co-Founder – Validic**

Yeah hi, this is Drew Schiller; I just want to say, so there is an organization called Programmable Web that already has over like 14,000 APIs that they take a stock of. They have 200 and, almost 300 API...health APIs if you do a search for health, already in their inventory. So it might be a good starting point just to see where they have and if what they have done is useful.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

The person I mentioned was the founder of Programmable Web so it's the same organization.

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

Great and this is...

**M**

Rose-Marie.

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

Sorry, this is Rose-Marie; I do have a list that I downloaded from Programmable Web that I can send to Michelle to share with the team. It's grouped by medical...it's grouped by the category either medical or other industries. I did focus a lot on medical it's about 40 pages in a word document. So I can send that to Michelle to share as well.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah and there's...

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Yeah, this is Meg. I think certainly that the value here is to understand somewhat of the market readiness, particularly for APIs in the healthcare field. And then understanding outside of the health industry, are there other best practices that we can draw from? And certainly that we can make recommendations that other types of practices are reviewed and implemented as well. So I don't propose that we limit this only to EHRs, I would like to see how, you know without completely overcasting the time that we have to spend and focusing only on inventorying; I think it would be really interesting to help us kind of judge that market readiness. Are there other best practices that we think align pretty well?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah, and this is Josh; just to point out that we'll also see a lot more source material for these APIs, for these N-API catalogs as a natural consequence of the Meaningful Use Stage 3 agenda and the next set of certification criteria. Because one of the things the vendors will eventually have to do is describe their APIs in a public document and include a link to that website where they describe their APIs as part of the certification process. But I think in this workgroup what we'd like to be able to do is get some early insights into where we are today without sort of waiting until the full certification process matures.

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

Also Josh, this is Leslie again. I think it's important for folks to understand the architecture of...the general architecture of how organizations make decisions about when to use and how to use APIs when data is being retrieved from them. So for instance if I am using Mint.com, I'm not going into the live production system that the tellers are using or the bank exchanges are using; they deliberately have for their consumer-facing group separate servers and separate architecture that allows more security.

And I think part of the panic around APIs in healthcare is people envision that everything ever done and available is available now and completely opens up my EMR for chaos. And so I think that what are responsible ways of architecting API uses to maximize security from other industries that we could learn could be very, very helpful. Or even I think NIST had done a presentation at one point in time about this, but I think that might be helpful to the group.

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

Yeah, I...this is Aaron Miri. I agree with that and in addition I would think that there are companies out there maybe middleware or security type vendors that do interface with multiple industries and in my mind I think of healthcare specifically, someone like Imprivata or someone like that that touches finance banking and everybody else and how they leverage open APIs and N-APIs to be able to make those calls, just for authentication purposes; I think that will teach us a lot.

**Lucia C. Savage, JD – Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

Hey Josh, this is Lucia; can I just make a really quick comment?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Please.

**Lucia C. Savage, JD – Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

The lawyer in me is a little worried. You need to let us at ONC take this back and figure out what our Paperwork Reduction Act and Public Records Compliance obligations are because this task force does operate in public and then come back to you with some recommendations about how to collect useful information within the time frame of the task force that also meets whatever legal obligations are imposed on this as a FACA task force.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Okay...

**Lucia C. Savage, JD – Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

And we'll bring that back...

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

This is Michelle; I think we need to touch base offline Lucia.

**Lucia C. Savage, JD – Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

...to you...

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

This is something we need to talk about offline. Thank you.

**Lucia C. Savage, JD – Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

Yup.

**Drew Schiller – Chief Technology Officer & Co-Founder – Validic**

So this is Drew Schiller. One concern that I have that I just want to sort of call out as we sort of start to think through this is so you take an organization like Programmable Web. They obviously look at a lot of different APIs; there are a little over 14,000. If we're going to make a recommendation that every HIPAA covered entity has an API for data. This is going to release, I don't know, 50,000 new APIs or something into the market and how usable would that be? So, we just need to think through like what this is actually really going to mean in terms of practice and how we can make this usable.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah, I think that's fair, I mean the one saving grace there might be that it's likely these APIs will be tied back, and this comes back to our Monday discussion, tie back to the vendors that are providing the support. And it seems likely to me that a large number of Cerner or Epic or Allscripts or so on, a large number of customers are going to be offering the same APIs because it's what their vendors helped them do. And so in terms of a catalog, my guess is we'll be able to...we would be able to cover a lot of content by dividing along vendor lines. And in cases where people are doing something custom or different or special, then yeah, you're right, there will be a proliferation of these APIs.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

I think another thing that might be interesting, and I know that we've got a separate set of slides and we'll be discussing the hearing and the panel questions here in a little bit but we may also be able to leverage some of the information that we're really searching for here in this "survey" as we look to that panel and what those hearings bring us, we could probably ask similar questions and get a fairly decent representation as well.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Josh, I have a question or Meg might be able to answer it as well; this is Aaron from NATE. If I'm a vendor and I offer a standard API for certification, I don't offer it in such a way that a local developer using that COTS could modify the API, do I? I don't permit them to modify things such as the APIs; I'm just trying to think through the proliferation...

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

I think as a general statement that's right, you know, as a contract or as an abstraction barrier, the value of APIs is they fix certain details of what you're sharing and how you're sharing them. And so they provide an interface on top of which you can innovate. But if the interface itself is too fluid, if it's changing all the time, if it's customized from day-to-day or from site-to-site, it actually becomes harder to build on top of that as a stable platform. So there's a balancing act, to be sure, but I think from my perspective Aaron, to a first approximation you said it just right.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

I think what I've seen is, where this may happen is there are new things coming to market that are different across all the vendors, but we want hopefully to see through contracts, especially for the COTS that are certified, that the API interface is fairly static so that everyone can expect the same thing. Where each of the vendors may have and introduce something in addition to the standard set, that based on the merit and the value it creates, may become part of a future standard.

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

Right. This is Leslie. We don't want to get to a point where we're just replacing the cacophony of single point-to-point interfaces with new technology. We want to...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Right.

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

...get to many-to-many relationships that create a network effect.

**Drew Schiller – Chief Technology Officer & Co-Founder – Validic**

This is Drew with Validic. Along those lines, do we...are there guidelines around what the data is that should be flowing out of these APIs? Because, I mean is it...is there a standard set or is that really for us to determine? I was looking through the guidelines and I didn't see anything specific.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

So in the...for the Meaningful Use and EHR certification domain, which I think is our real focus here, yes, there are guidelines and the term in Meaningful Use Stage 3 is the common clinical data set. And as Aaron pointed out last week, there's a little bit of ambiguity about exactly what's in and what's out, you know final results versus in progress results, but the basic common clinical data set, I'll see if I can pull up a reasonable definition in Google here, is what we're talking about here.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Are you going to display it, Josh?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

I'm trying. Hopefully you can see my screen; is that the case?

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Umm, yeah.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah, okay. So there's sort of the blogosphere summary version and the number of EHR vendors have put together a blog post; it's where they summarize what's in that data set. And then there's, in the Federal Register, the actual definition of the thing and by sort of glancing back and forth between those kinds of sources, you can get a pretty reasonable approximation. But, let's see if we can.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Yeah, there's a pretty reasonable definition on page 328 of the CMS regulation regarding a definition for common clinical data set, previously referred to as common MU data set.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Right.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

It's at section 170-107, I think.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

I shouldn't do this online because I'll waste time digging through giant documents, but here's the common clinical data set definition; this is the definition that we're talking about and unfortunately now that phrase appears nine times. All right.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Josh, I have it up if you want me to just read it out, I just went searching.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Sure, if it's short enough to read, by all means.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Yeah. Common MU data set means the following data expressed, where indicated, according to the specified standard. So it has a list of items 1 through 16; one being patient name followed by sex, date of birth, race, ethnicity, preferred language, smoking status, problems (one or more), medications (one or more), allergies (one or more), laboratory tests (one or more), laboratory values/results, vital signs to include height, weight, blood pressure and BMI; care plan fields including goals and instructions, procedures and then care team members. I can send the link to...or I can post it actually in this chat, I think...

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah, that's perfect. So that's a rough...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

...for folks to view. It took me like an hour to find it, sorry.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

That's the rough set of data that we're talking about and to put a finer point on it, among the API requirements in the 2015 certification criteria, there's this notion that there's an API call that says, get me a C-CDA summary of the patient, and the summary should include all that stuff. So one way that you could look at it is that these are the set of summary data that would go into a C-CDA document about a patient. Now C-CDA is not the only way you can expose this stuff and the language is pretty clear you could do it with FHIR, so discrete resources instead of a giant document. But if that's a world you're familiar with, that's a good way to think about what belongs to that set.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Do you see that I posted it to the chat, Josh?

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

I don't have a good way to switch back and forth between screen share and the chat, but hopefully others can see it.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Oh, okay.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

I don't see it; all I get is a public comment box and I've put a comment in there, but I don't see any private comments or any other way to chat.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

All right, we'll send out an e-mail later to make sure that everybody gets it then.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Great or Lonnie you can shoot it out now, whatever works.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

So, other thoughts or comments about what we could put together on this survey and if not, we have a couple of other items on the agenda for today's call. All right, let's...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

You know...

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Sorry?

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

I'm sorry, if we can capture an open-ended question, I think I would like to know what folks priorities are with regards to APIs.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Priorities, good.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Hey Josh and this is Meg. Did we, or maybe it was my...do we have an ideal timeframe where the work members have a few extra days if they want to e-mail suggestions back or how quickly would you like to see that survey...?

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

I think as soon as possible would be helpful, if we can get the questions back since this is moving pretty fast-paced and we're in holiday season.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Okay.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

I think any...this is Aaron's two cents, like if we make it any longer than what you guys have already, a lot of the folks will just skip doing it, so I think keeping it short and sweet is a good idea, too.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Very good. So let me transition back over to Meg, I think. We have two more topics on the agenda for this call?

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

We do, yes. So this is Meg; the next one David is actually you, if you wouldn't mind for the next few minutes sharing some of the thoughts that you shared earlier through e-mail around additional API privacy and security considerations.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Sure. Thanks very much; I didn't expect to be on the agenda, I thought we were just sort of supposed to send in some e-mail thoughts, but I appreciate getting the chance to bring it up and now that I've been able to look at my comments compared to how far along this group has come so quickly, it seems that a number of the things that I was referring to in my e-mail have already been addressed. But let me just run through a few thoughts. I had a chance to sit back and think about this after our first call on Monday and...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Sorry, before you go...

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Yeah.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

...your name and where you're from, I'm sorry...

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Oh I'm sorry; yeah it's David Yakimischak...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

David, yes, thank you.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

...and I'm from Surescripts. Yeah, sorry about that.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Very good. My fault.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

No problem. So the first think I thought about was, well I'm a consumer of APIs every day, because I use G-mail and behind the scenes, you know when I'm using the web portal version of G-mail and my iPhone version of G-mail, in behind the scenes it's using APIs all the time and those APIs are publically available if I wish to write a program that can interact with my inbox and my outbox.

But I think that helps demystify the whole concept a little bit and it reminds me that I agree with the comments that were made previously that consumers typically don't even know that they're interacting with an API. They just use G-mail and I'm very happy to do so, but in behind the scenes there's a full API, including both to get to the data which is in my inbox, but also the security model, which in the case of G-mail, they happen to use OAuth 2.

But what they've allowed through their security API is a nice little second factor of authentication so if I choose, I can click a box and I get a text message or can run a little App on my phone that won't allow anyone to log in to my G-mail account unless they have my phone and have that second factor, that little PIN code number that gets sent to me. So I think that's actually just helped me think about what we're really trying to achieve here which is, you know, people are using APIs all the time. They don't necessarily need to know so and there's a security model that overlays it that is something that they figured out a way to protect the assets they needed to protect and that it's something that easy to use and that's sort of universal, would seem to be something that we might want to achieve.

I think the comment regarding metering and thresholds is really important because just like G-mail, Google has an API for maps. So if I have to build a website that is for my son's rowing team and I want to show where the boathouse is, I can call the Google maps API and I can show a map and put a pin where the boathouse is. But if I try to do that more than 10,000 times a day, they'll throttle me back and they'll say, "No, you're making too many API calls."

I think actually they've done that now on the geo locating as opposed to the display side, but nevertheless, there is throttling. And I think that's one thing we may want to consider here on our agenda is whether throttling is something that we either want to discuss, recommend or require because I think we also have to look at the question of how much data can someone get at a time. If it's just one patient getting their one piece of data at a time, I think that's one flavor of API, but the question of, is there a type of call that can get multiple patients, hundreds of patients or thousands of patients worth of data at a time is something that we would need to address because I think an API that supports multiple hundreds or thousands of records at a time provides a different set of security risks and privacy concerns.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Yes.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

So single user access one patient at a time is maybe something that we want to consider as a recommendation to limit the scope of access that someone could get.

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

This is Leslie; I would argue that that is...or agree with that because if there is a need to do thousands of patients at a time, there's probably a different business relationship there...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Yeah.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Um hmm.

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

...there's a more substantive relationship there that looks to...that has significant business agreements already in place that has a lot of rationale around sharing that kind of information. Perhaps the only area that that might not occur is in public health or in research; but again, it should be based upon a more profound relationship than a single query of a patient.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Yeah.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

This is Aaron; when they...we, I also participate in the HAART Workgroup and came to a similar conclusion that at least for now, right, let's prioritize on the response for a given individual in the API set, not...

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Um hmm.

**Aaron Seib – Chief Executive Officer National Association for Trusted Exchange (NATE)**

...more than one would be pretty unusual. Or you would...if you had a family of three people, you would serialize three queries, right?

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Right.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Or three posts.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

It's similar to G-mail, I mean I only get to my inbox, unless I've done a configuration to put two or three accounts together behind the scenes and hook them up through security, which is similar to a family, right? Or a caregiver...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Right.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

...needs to get three pieces...three patients worth of information at a time; it's a great comparison, thank you.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

So this is Josh, I'll just say that even though the individual connections may be mediated by one consumer at a time, and the individual API queries might just be about one consumer's data, you could still have a situation where, you know one EHR vendor is exposing data from millions of patients...

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Um hmm.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

...and one particular App has been authorized by tens of thousands or millions of patients to access the data. And so you have a situation where one App still has access to millions of patients' worth of data...

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Yup.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

...from one system, even though it can just request one at a time and so some of the security considerations when it comes to large scale data access patterns may still apply, even when the APIs are single patient.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Yup.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Agreed, agreed.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

So the thing it brings up, and you already mentioned in the talk this morning is this idea of monitoring and audit, you know so that the interface owners are monitoring to see how many patients are being pulled by who at what time so that there's some degree of scrutiny so that these APIs aren't just viewed as open hoses just pouring data out without somebody checking to see who's making which inquiries when and how often.

Okay, just to run through quickly here, the other thing that came to mind was this question of whether the data should be "free and open" or whether digitally watermarking or signed in such a way such that the data is delivered in a digital envelope. And any time that envelope gets opened, no matter who it is sent to beyond the patient, that there's an audit log that's maintained so that we would know any time...we, not we, someone, the patient could find out who opened their envelope. So once the data's been extracted through an API, sealing it into a digital envelope is something we might want to discuss and debate because there are pros and cons.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Right.

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

I think there are two questions there; one is do we need a Good Housekeeping Seal of Security that says, this is a tamper-proof thing that has just moved through the ecosystem. I think that's a yes, but the burden of saying who opened it when and where is that...that's a run issue and we're still at a crawl issue.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Um hmm.

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

But to have actually the sanctity of this interchange valued, we will have to have, in my opinion, something that says there's a tamper-proof seal, especially as a consumer is involved, which they...data is being moved from the...by the consumer, the receiving entities want to know what the actual provenance of...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Origin.

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

...or if the data has been altered at all. So if we do get to that discussion, I would advocate we talk about crawl, walk, run phases of that.

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

And this is Aaron Miri; I like that but I go back to, don't we have precedent with things like checking your financial scores, like your credit score and others. I mean literally I can do it from my mobile phone and it's good enough for me as a consumer. So, I mean could we not also look at other industries and what they've done to overcome that? I mean, I don't want to add too much...

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

Yeah, if I could...if I down...

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

...burden to something that suddenly it's unusable.

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

Right, but if I downloaded information from Wells Fargo, I don't have the opportunity today to send that information to Barclays bank and say, this is my balance because I told you so.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Right.

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

So there's nothing that allows me to do that without an intermediary there that somehow has some sort of either direct connections to multiple APIs with a trusted environment or in the case of healthcare, something that would say, I'm sending this from doctor A to doctor B; I haven't opened it, you can be assured that this is exactly what the doctor stated.

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

Ah, okay, so you're talking about being a broker essentially, okay.

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

Totally. The biggest, I think one of the biggest opportunities in this is for the patient to be a data intermediary or data exchange of one and to, because right now I think a Surescripts study actually showed that almost 55% of physicians felt they didn't have the information needed to do the job. So the patient's going to be part of that mix to help move data around.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Okay, just two quick points; I don't want to take up too much time. One we've talked about enough is that I think there's an industrial strength B to B or provider to provider level of API that's different from the consumer one sip at a time.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Yeah.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

There's no doubt in my mind now as I think about this, and that was brought up earlier so I think we're on the same page there. And then finally, and I just want to confirm something from the previous call. So in surveying some people that I talked to this week, the concept of identity management came up and what this has to deal with is, you know, in G-mail all they have to do is verify that I'm the account owner; they don't verify that I'm actually David Yakimischak and I live in, Mendon, New Jersey. They just know that I'm under control of the account.

I think in healthcare we've got a different dimension here which is we need to verify that I'm actually David, the David Yakimischak with his DNA who's getting his information. And so identity management, identity proofing, I think it's inseparable from security and privacy, but I thought I heard on the call last week that we were going to scope that out and I wonder if we should...if that was the case and if we should reconsider that?

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

I would agree with you, I don't think they're separable, at least from a patient point of view.

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

And I would agree...this is Aaron Miri. From a hospital perspective, especially being that providers are now going more and more in the community and being mobile, it's critical.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

So this is Josh, I mean what I would say is, it depends on your use case in a lot of ways and there are some cases where a patient might want to have a more or less pseudonymous relationship with the healthcare provider and still have access to a set of data that's been collected. My absolute identity may be useful in some situations, but might not be required in others.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

And see this is happening already in terms of portal access, in terms of a patient presents at a clinic and is then given some form of access, you know a token or some piece of paper or an e-mail that they can then use to verify that they're the person from that clinic who can get in to view that record. And so this is sort of happening loosely, I just wonder if we need to discuss the topic and whether standardization is necessary because I think without really strong identity management on the consumer side, it's going to raise concerns on the consumer side and it definitely raises concerns on the provider and institution side.

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

Yeah I...

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

This is Aaron Miri, I could not agree more and to that end, I think the whole portal notion, I think, is being proven over and over again with data that's...that may be not the best vehicle for what consumers are asking for. And so from a consumer and from a provider perspective trust, that is going to be the speed limit here for which we roll at. So, I agree, we need to talk about authentication.

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

And this is Leslie and I would say the need for anonymity is not from the patient's request for an API, which there is no such thing as anonymous; I have to prove who I am in order to connect with you. However on the provider use case, we didn't talk about one of the most I guess successful API implementations we have through Meaningful Use and that's the little Infobutton standard where we're connecting to the National Library of Medicine, to non-profits like us, to many other...to JAMA, to you name it through an Infobutton API connector to the tune of about 4 million times a month; so, it's successful. In that case we are not passing patient demographic information, we're passing a patient, a person with this medication or this problem, complaint, medication, laboratory results and so forth at a context find the most available clinical decision-support through article that's given through JAMA. Find the patient education; find other types of supporting referential material to support this particular case I have, not person. So there is use for anonymity, we have it today but from a patient point of view, I have a relationship with that provider, it's about me.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Yeah. I think one of the things that I found very valuable recently was a presentation by Tim McKay from Kaiser Permanente. And specifically they are using a portal which I agree Aaron, it's not nearly facile enough for consumers, but the rules that they've implemented; they made recommendations around for authorization and authentication and so forth. They have 5.5 million users at this point using it, so...

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

No, I think that's great. This is Aaron again and I would also think that there is some really cool stuff going on in healthcare; I know what Boston Children's has done and what others have done and there's even stuff now with vein recognition in your hands for quick identification and quicker edge. You know go back to the company I referenced earlier, I just know them because they're leading in the healthcare industry, Imprivata. They do some really cool things around identity and then also anonymity perspective, but really from an identity and authentication perspective. I mean I think it's worth talking about because this is going to tie quickly into how quickly people will trust using information over an open API of any sorts.

**Drew Schiller – Chief Technology Officer & Co-Founder – Validic**

This is Drew, I think we're blowing this way out of proportion here, like I mean, security and authentication of an individual has been part of the API framework for ever since APIs existed and we have major massive, multi-billion dollar indust...multi-trillion dollar industries like the finance market that uses APIs all the time and trusts that people can authenticate and understand. And individuals, I think, understand by virtue of the fact that they can authenticate with Google, authenticate with Facebook, they can sign in to other services. They're used to that workflow and they're used to saying, this is who I am.

I don't think we need to get into like really crazy biometric authentication here; I think that we can have a...I think we can leverage existing standards that are in place for identity management that are pretty good and frankly a lot better than what we already have in healthcare today.

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

This is Aaron; I agree with you Drew, I'm just simply saying though it's good to understand what the market has and where people are going and where the market is headed so we can make recommendations from as it goes back to what we're tasked with, in an educated manner.

**Drew Schiller – Chief Technology Officer & Co-Founder – Validic**

Yeah.

**Aaron Miri, MBA, PMP, CHCIO – Chief Information Officer – Walnut Hill Medical Center**

So I'm simply saying information gathering, I'm not saying define a solution to the problem before we understand the problem.

**Drew Schiller – Chief Technology Officer & Co-Founder – Validic**

Okay, that's great.

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

And but the authentication and access should not prohibit in any way how the consumer uses the information, so if it...

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Once they have it, yeah.

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

...I want to be able to perhaps register my one App to all 14 of the providers that I use; I should not be prohibited from having that App unavailable because a provider doesn't have it in their approved or sanctioned area. If I have a way to register my App because I've shown who I am, I've presented my ID to my provider, they given me a user ID and password I want to be able to do that just like Mint.com. I think we're probably getting ahead of the conversation...

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

Yeah, we are and I was about to start talking about data privacy and HIPAA and breach and all sorts of things, especially from a hospital perspective and how careful we are with data and where it goes. I agree that's probably a conversation we all need to have here as we're talking about both these topics, but I think we just keep it to scope and not bite off more than we can chew.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

One thing though...

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

So this is Meg, I do think that it's fair that we have identified this issue and we can certainly talk a little bit more through what that means as far as how we can be helpful. Obviously we know in the past ONC has been asked to provide guidance on identity proofing and authentication of patients and it may be helpful for our group to add some additional clarification around that request, but I do think that that may be something that's currently...maybe...so I guess my point is, maybe that's a request that we could go back to ONC and ask, where are they at with providing that guidance?

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Right.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

And are they looking for any facilitation? Are they looking for any clarification or help in doing so?

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Meg this is Aaron with NATE, I would just ask one of the things that Leslie mentioned, and I think we're going to be looking for people to testify and that might be the last item on the agenda, I don't have a great deal of familiarity with Mint or how it actually works so I'd love to see that parallel, have someone present from Mint.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Okay, that's fantastic; I don't think we saw that.

**Richard Loomis, MD, CPC – Senior Medical Director & Informatics Physician – Practice Fusion**

There's actually...this is Rich, just on that topic. There's actually a company, Medfusion who is doing something very similar in healthcare as Mint is doing in consumer finance, actually going out and leveraging the VDT functionality of patient portals required by certification and using patients as consumers credentials to log into multiple sites and then aggregating the CCDs in a single location. So, not using an API per se, but that is actually happening today.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

The part about the Mint...

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Well how about we do this, David, if you...we're running short on time; I know that we'll still need to open for public comment. David, if you're fairly comfortable with where we're at, maybe we can go ahead and ask Michelle to open up the next set of slides and we can start opening up the discussion around the straw man topics for the hearing.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Great.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

And I just know as we're doing that so the purpose of what we're trying to do today and we'll have an offline, an administrative call to actually talk about the actual panelists or the actual presenters that we want to propose. But as we define the questions that we want the answers to and the topics that we would like explored, I think that we can frame those in such a way that it's going to make sense to have...to send an invitation to a presenter like that, for example. And that's something again that we would discuss during that admin phone conversation.

So I don't see...my slides haven't switched yet; is my computer just slow?

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Mine haven't switched yet either.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

There it goes, it's creeping.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

So while we bring up the slides, why don't I just give a little bit of background on what we typically do for virtual hearings, what we've found to work well, so people understand the structure? So we have two virtual hearings on the calendar at the moment. Typically we try to limit the panels to about 4-5 people per panel. We usually give a pretty hard set time on the amount of time they're given for testimony. We typically go with five minutes, much more than that and you tend to lose your audience a little bit, especially on a virtual call.

So if the panel has four people on it, each one would be given five minutes to present, so that would be a total of 20 minutes and then what we typically do is open it up to questions related to the topic. And it's really in those questions and in that discussion that we have found that we get the most out of the hearing, because they're able to dive a little bit deeper into answering...getting answers to specific questions you might have about something.

We tend to find that when people testify, they certainly try to answer the questions that we give them, but they're also going to provide a spin on it that may not be an answer to a question we're looking for. So it's really in that discussion that we have found that we get the most information out of the hearing.

For those of you who have been involved in the past in a hearing, I'm pretty...we set the clock and we limit them so that there really isn't much going over that five minutes. We try to be fair to everyone. We'll use the hand-raising feature within the Adobe Connect when it's time for the task force to ask questions. We'll just put you all in a queue and just go one by one and ask questions until the time is up for that panel.

So just to give you a little background on how all of that works, I'll now turn it over to you guys to start to walk through the panels and the proposed questions. We probably won't have a lot of time today to talk through those questions, so if you have edits or other thoughts about questions, please feel free to send those after the fact. And if you...we've already seen through the tab, there have been a few people that have listed some names; if you have names of people that you think would be good to hear from, if you could send those to us as well, that would be wonderful.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

So I think...Michelle, thanks for that. Just a quick question; so as we create these questions are the expectations that the panelists will give written responses to the questions as well as what they deliver during the hearing and then we'll see the written versions beforehand or how does that typically work?

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

So that's the hope. So we'll give them the list of questions, depending upon how it goes, it's kind of assumed that within those five minutes they probably won't be able to touch on all of the questions that they're asked. So we ask them to provide written testimony if they can; again, they're all volunteers so we'll take what we can get. We always give a deadline beforehand to try and give you all time to read their testimony.

We don't always get things in a timely manner so that you have time to read them through, which is why that discussion during the virtual hearing becomes so important, because you'll be able to ask questions that you may not have heard during their public testimony. But in an ideal circumstance, they will send a longer written testimony and respond to the highlights of that testimony during their five minutes.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Great, thank you.

**Drew Schiller – Chief Technology Officer & Co-Founder – Validic**

This is Drew with Validic; what is the goal on the non-healthcare specific side with consumer tech and social media? What are we looking to do, is it just to understand where they've had successes and see what we can learn from them?

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

Yes, this is Rose-Marie. The idea was to bring in non-healthcare technology service providers and others since they have more experience in this field than healthcare and we could learn from them, exactly what you said, we could learn from them the technol...the privacy and security challenges they faced as well as any other things that we could leverage rather than reinvent the wheel through healthcare, essentially reusing what has worked well for them.

**Drew Schiller – Chief Technology Officer & Co-Founder – Validic**

Okay, thank you.

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

Thank you.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

So maybe what would make sense, and I know that our next meeting on December 11 we're going to go through and refine the questions a little bit more. Maybe we'll just focus here on the panel structure itself and then just understanding that the questions that are being proposed, it looks like the format, there will be general questions for all of the panelists and...or for all panelists within the panels and then there will be specific ones for each panel type that we want to tailor a little bit more toward the types of questions that we want them to answer.

And then Rose-Marie, if you wouldn't mind, I didn't quite get this. The last two slides, the current law and legal issues and then the other info needed; could you kind of walk us through what might be helpful for us to review and provide feedback on around those last two slides?

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

Sure. Michelle, could you move to the last two slides? We created...we have a word document and we moved it to a slide deck, so I don't have the slides in front of me but I'll take a look at it. Again, we were trying to come up with categories where we could lump the questions that we had sort of brainstormed on and so these categories could change.

But we talked about specifically targeting these questions for consumer technology and we're thinking of different aspects where we could address other questions, so we added some legal categories there, but it's still really in entry-level stages; we need to refine them. Does that answer your question Meg? It was done last night and so all the regrouping was just done and we're trying to think of different categories we could create for this task force for the questions. So we thought current law and policy issues may be one category; however, we haven't vetted this through.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Okay, gotcha. And then that final slide, the one that says other info needed, provides background to the standards and Transport and Security Workgroup, is that something that's part of that panel or...

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

Correct, it's going to be part of the panel, that's correct.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Okay, gotcha. Okay so that's...I think that's pretty helpful to kind of sketch a framework and then we'll have a week or so to read this and develop some thoughts and suggestions and then when we reconvene next time, we'll walk through and kind of refine what those are. Does that sound good to everyone?

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

It sounds great. Meg, if we had some questions or thoughts to share, should we send it to you and Josh or to someone at the ONC? What's our protocol?

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Umm, well I think, Rose-Marie does that matter, would you like the comments to be held until the meeting on Friday or could we do some of this through e-mail beforehand?

**Rose-Marie Nsahlai – Office of the Chief Privacy Officer – Office of the National Coordinator for Health Information Technology**

I think through e-mail would work. So if you could copy Michelle, Michelle will make sure I and my team gets this, so you can e-mail to the FACA support or through Michelle; she will coordinate to ensure our team gets it.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Yeah, the address that is sent out with meeting materials, if you just hit reply all to that, you'll probably hit most of the people that you should.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

I don't like hitting people.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

It's just a metaphor. My mom yelled at me when I hit people, it was terrible. Sorry.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

All right, well fantastic, I think that's all that we had. Michelle, do you have any closing thoughts?

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

No, I think it sounds like we're ready for public comment.

**Meg Marshall, JD – Director, Government Health Policy – Cerner Corporation**

Okay, great.

**Public Comment**

**Lonnie Moore – Virtual Meetings Specialist – Altarum Institute**

If you are listening via your computer speakers, you may dial 1-877-705-2976 and press \*1 to be placed in the comment queue. If you are on the telephone and would like to make a public comment, please press \*1 at this time. Thank you.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

While we wait to see if there's any public comment, we did receive some recommendations and some comments in the chat that we'll be sharing with the task force, so just be on the lookout for those.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Hey can I just ask...this is Yak. I see a public comment window at the bottom of my screen, but I don't see anywhere else to do chat, am I missing something here in Adobe Connect?

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

No, it's a public comment so anything you put in there, we could potentially share publically.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Okay.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

There is no chat within...across the members though.

**David Yakimischak, MBA – Senior Vice President, Information Systems – Surescripts**

Okay, thanks.

**Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology**

Yup. It looks like we have no public comment so thank you all and we look forward to your feedback and have a wonderful weekend.

**Joshua C. Mandel, MD, SB – Research Faculty – Harvard Medical School**

You too; thanks a lot everyone.

**Robert Jarrin, JD – Senior Director, Government Affairs – Qualcomm Incorporated**

Thank you.

**Aaron Seib – Chief Executive Officer – National Association for Trusted Exchange (NATE)**

Take care.

**Public Comment Received During the Meeting**

1. Adrian Gropper: The JASON reports focused on separation of the data storage vs. data access authorization. How is that represented in the real world today and in healthcare?
2. Jkeegan: Is the intent of the survey limited to EHR vendors? As a collaboration platform, it would be good to participate.