



HIT Policy Committee Consumer Workgroup Final Transcript February 6, 2015

Presentation

Operator

All lines are now bridged.

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 of the Health IT Policy Committee's Consumer Workgroup. This is a public call and there will be time for public comment at the end of the meeting. As a reminder, this meeting is being transcribed and recorded, so please state your name before speaking. I will now take roll. Am...I'm sorry, Christine Bechtel?

Christine Bechtel, MA – President – Bechtel Health Advisory Group

I'm here.

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

Hi, Christine. Amy Berman? Brad Hesse? Clarke Ross?

Clarke Ross, MA, DPA – Public Policy Director – American Association on Health and Disability

Good morning.

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

Hi, Clarke. Cynthia Baur?

Cynthia Baur, PhD – Senior Advisor, Health Literacy, Office of Communications – Centers for Disease Control and Prevention

Present.

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

Hi, Cynthia. Dana Alexander? Danielle Tarino? Aaron Mackay? Ivor Horn? Kim Schoefield?

Christine Bechtel, MA – President – Bechtel Health Advisory Group

You know what, can I...

Kim J. Schofield – Advocacy Chair – Lupus Foundation of America

Here.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

...interrupt for a second. There's...somebody's got background noise so I'm a little bit worried that people are saying that they're hear but you can't hear them. So maybe if everybody could mute, that would be great.

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

Yeah, I was going to ask after roll because we need them to actually say they're here. Leslie Kelly Hall?

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

Here.

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

Hi, Leslie. Luis Belen?

Luis Belen – Chief Executive Officer – National Health IT Collaborative for the Underserved

I'm here.

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

Good morning. MaryAnne Sterling?

MaryAnne Sterling, CEA – Co-Founder – Connected Health Resources; Principal – Sterling Health IT Consulting, LLC

Here.

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

Hi, MaryAnne.

MaryAnne Sterling, CEA – Co-Founder – Connected Health Resources; Principal – Sterling Health IT Consulting, LLC

Good morning.

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

Nicholas Terry?

Nicolas P. Terry, LL.M. – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

I'm here.

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

Good morning. Philip Marshall?

Philip Marshall, MD, MPH – Founder and Chief Product Officer – Conversa Health

Good morning, Phil's here.

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

Good morning. Teresa Zayas Caban? Theresa Hancock?

Teresa Zayas Caban, MS, PhD – Chief of Health IT Research – Agency for Healthcare Research and Quality

Good morning.

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

Oh, good morning. Theresa Hancock? Tripp Bradd? Wally Patawaran? Wendy Nilsen? Will Rice?

Will Rice, MBI – Director Health Informatics – Walgreens/Take Care Health Systems

Good morning.

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

Hi, Will. From ONC do we have Chitra?

Chitra Mohla, MS – Director, Workforce Programs Office of Provider Adoption Support (OPAS) – 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, Chitra. Are there any other ONC staff members on the line? Okay. Before I turn it over to Christine can I please ask that if you aren't speaking if you could please mute your line because there is a little bit of background noise still. And with that, I'll turn it over to Christine.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

All right, thanks Michelle and good morning everybody. So just to bring you guys up to speed on where we're at and give you a snapshot at where we're going. We did submit our comment letter to the Health IT Policy Committee on the Federal Health IT Strategic Plan, so thank you everybody for all of your hard work on that and you guys have a final I think came out over email. And I'm going to be presenting to the Policy Committee on Tuesday, so, that will be...exciting, it'll be a big day on Tuesday.

So as you guys recall, now it's time for us to shift gears into thinking about the Interoperability Roadmap. So, we will figure out a similar process to what we used for commenting on the strategic plan; we have a longer timeline, thank goodness, than we did for the strategic plan to consider the roadmap. And so today is really our first dive into that process. We...you guys have all seen, hopefully, the Interoperability Roadmap that came out about a week ago and one of the things that we asked you was, what do you need to get prepared for diving into that comment. And I think it was Erin made the suggestion that because APIs are a big part of the Interoperability Roadmap, that what we could do would be helpful, and I completely agree, is to have a briefing on what APIs are, you know, the role they play in the roadmap and how they help consumers.

So, we're going to dive into that today and I'm going to introduce our speakers in a second. But what we will then do is I think maybe...well Michelle probably will talk about this, and I think it's maybe next week, we're going to be charged by the Policy Committee with commenting on the roadmap and they are going to give us some specific guidance around what questions and what parts of the roadmap they want us to dive into, because it is a pretty big and substantive document. So we'll take that guidance, and our next meeting is February 23, and we'll begin to dive in.

So, I just want to encourage you to do a couple of things; one is, you can dial in or log in on Tuesday when the Policy Committee and the Standards Committee are going to have a joint meeting and they will get a briefing on the roadmap. And you can also, if you can't make it on Tuesday, you'll be able to listen online anytime and to do that and read the roadmap before our February 23 meeting so that we can really be ready to dive in and get to the meat of the questions. I will work with Chitra to get those questions out to the group so that you can start to think about them before February 23, and then we'll probably have a speaker who will be from ONC who can help us with any questions we have about the particular sections of the roadmap that we're looking at, etcetera.

So hopefully that gives you kind of a snapshot into where we are and where we're headed. Any questions on that? Okay. So I think...let's go to the next slide because I think I'm going to turn it over to Michelle to do kind of an overview of our work plan, is that right?

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

Umm, I'm happy to do it, I don't see the work plan up, but I'm just going to...

Christine Bechtel, MA – President – Bechtel Health Advisory Group

There it is.

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

...add on to what you just said. There it is. So as Christine said, next Tuesday, February 10, there will be...the Policy Committee will be...have a meeting. The first part of the day will be the comments on the Strategic Plan and the second part of the day will focus mainly on the Interoperability Roadmap, as Christine said. We highly recommend that you listen in and following today's call, we'll send you all the details for that meeting. We'll also follow up and share how you can listen to that meeting if you aren't able to attend live and where you can find all the materials for that meeting.

As Christine said, we just...the roadmap is very large and coming out of that meeting, this workgroup will be charged with a specific question. And if you've already taken a look at the roadmap, we'll also share the roadmap with you, in case you haven't seen that; we'll also share some general questions related to the section that you will be assigned in the roadmap and then some specific questions related to that section. And all of those charges will be made at the end of the meeting on Tuesday, as Christine detailed.

So, there's a lot of work in front of the Federal Advisory Committees. We are working towards having comments on Interoperability Roadmap by the April Policy Committee meeting, which is on April 7. And then, depending upon when the Certification Rule and the Stage 3 Rules fall, we are planning to have a presentation at a future Policy Committee meeting and then we'll also charge this workgroup with responding to some portions of those rules. So there is lots of work ahead, until probably about the summer, I'd say May or June and after that, maybe we'll give you a little bit of breath and we can move on to new...other exciting endeavors. But for the moment we're keeping you very busy.

So we'll follow up with more details about how to find the...where to find the Interoperability Roadmap and our next steps for you to listen in on Tuesday.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Awesome. Thanks. Any questions for Michelle? This was a...quite a packed agenda for the next several months.

Erin Mackay, MPH – Associate Director, Health Information Technology Programs – National Partnership for Women & Families

Hey Christine, this is Erin; I had a quick question on the due date for Interoperability Roadmap comments, do we get extra time because we are workgroup members? I'm just asking because I thought roadmap comments were due by April 3...

Christine Bechtel, MA – President – Bechtel Health Advisory Group

I thi...I don't...I'm sorry?

Erin Mackay, MPH – Associate Director, Health Information Technology Programs – National Partnership for Women & Families

I could be wrong, but I just wanted to double check.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Well I think, even if it's April 3, our comments need to be in on the Interoperability Roadmap by March 30. So I'll present them April 7, but we will...

Erin Mackay, MPH – Associate Director, Health Information Technology Programs – National Partnership for Women & Families

Oh, I'm sorry.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

...have to be done by then.

Erin Mackay, MPH – Associate Director, Health Information Technology Programs – National Partnership for Women & Families

Okay, thank you.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

No, that's okay, I'm glad to clarify that.

Cynthia Baur, PhD – Senior Advisor, Health Literacy, Office of Communications – Centers for Disease Control and Prevention

Hi, this is Cynthia, I have a question for the ONC staff. So what's the timeline then on revising the Strategic Plan?

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

Umm, so ONC is going to take all of the public comments and then inform their work on the Strategic Plan. I don't...I'm not quite sure. I can't speak for that team on what their next steps are, what their timeline is after that. But there will be a process of synthesizing all the public feedback they received, in addition to the feedback that they receive from the Advisory Committee.

There may be some additional work coming out of the meeting next Tuesday in the morning, when Christine presents on behalf of this workgroup and then the Strategy & Innovation Workgroup presents. There could potentially be comments from the Policy Committee that we need to revise to any comments made and recommendations made coming out of these two groups; so there may possibly be a little bit more work, but I think that will be minimal.

Nicolas P. Terry, LL.M. – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

Christine, this is Nick.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Hi, Nick.

Nicolas P. Terry, LL.M. – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

How are you? I'm still upset...

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Great.

Nicolas P. Terry, LL.M. – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

...still upset about the snow stopping me coming to the annual meeting. I had a question about the way HIT PC was going to choose the topics that we were going to have as our brief; and one in particular, that...as I've been going through the interoperability plan, some of the comments about privacy and security seem somewhat ambiguous to me as to whether they were to be liberalized or made stronger. And I hope that someone will advocate for this Consumer Workgroup to still have a say on privacy and security in the plan.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Well thank you, I'm glad you said that be...so that ONC staff can hear that. I...we will be asked to do some specific, I think, comments on certain sections, but to the extent that we want to add to those, I am not averse. So, definitely as you guys are reading through, I think the major criteria is that it needs to be relevant and appropriate for a Consumer Workgroup comment, which obviously that is. So, I'm not averse to adding a couple of things to the list. Any other questions before we dive into our content today? Okay, so let's go to the next slide. All right, so what we're going to do is two presentations today...first, I want to introduce our speakers. Do we have Gray Brooks on the line? I realize should have checked that a lot earlier.

Gray Brooks – Senior API Strategist – General Services Administration

Hi, yes.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Awesome. Welcome. Thank you so much. So we're going to hear from three people today. So the first is Leslie Kelly Hall who is partnering up with Kevin Harbauer, both from Healthwise, to talk about API and consumers. You guys know Leslie because she's a member of the workgroup, she's also a member of the Standards Committee. And Healthwise, for those of you who don't know, is an organization that delivers innovative patient and consumer education through interactive, online tools. So they are kind enough to help us kind of translate what APIs are all about for consumers.

And then we're going to hear from Gray Brooks. And Gray is the Senior API Strategist at the General Services Administration and his work focuses on making the transition to APIs as easy as possible for agencies under the government's digital strategy. He's got a great background in online social organizing and politics. He co-lead the digital overhaul of the FCC's web presence, so, he knows what he's talking about and we're very grateful to have him today to really give us a foundational understanding of APIs. So with that said, I'll turn it over to Leslie and Kevin and we'll go from there.

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

Great; thank you, Christine. We'll go ahead and take the next slide. So I want you to think about technology today, and we are generally in transaction world where we ask systems to fetch something for us and it comes back. This might be a document, it could be an email; but in large part, when we view or we download or we transmit something, we're really managing transactions. What APIs really do is move us from transactions to relationships; systems that have agreements to share, systems that agree to identify who people are, what you have access to, what you share and who you share that information with.

So relationships change everything and as API relationships are formed, we begin to form a network affect where not only do I connect this system to a system of my choice, but my friends connect to systems that I connect to. So let's give you an example. So today let's imagine you're on your phone and your phone knows who you are. It knows your health insurance, your physician preferences, all of your demographics. It might have your health profile; your height, your weight, the recent health concerns that you might have; your interest in wellness. You've also identified in your phone your physician preferences, your hospital preferences, the apps that you like to share, perhaps your calendar and a variety of other things that you control in your domain of your mobile phone.

You wake up in the morning and you were feeling poorly. You use a symptom checker on your phone and that symptom checker says to you, boy, yup, we'll do some watchful waiting. If the symptoms change then you'll need to contact your doctor. In fact, your symptoms change. Now as you identify those new symptoms on your phone, the phone notes who you are and again, where your doctors are located. You decide that you really need to contact the doctor. The system, because it now has a relationship with your provider's system, goes ahead and locates and identifies the physician closest to you in your plan, because your phone knows your location and your physicians in your plan.

It then seeks out a most available appointment that meets the needs of both of you, both your provider and you, schedules that appointment, launches an appointment app, and confirms that appointment at both sides. It also knows that your health history, your values, your goals of care and has passed this on to your provider so that when you arrive for your appointment, your appointment has fully informed the electronic health record to know why you're there. The problems you're having, the symptoms you had, including perhaps information directly from devices connected to you; what your goals of care are, what your values and your preferences and your interests are so that when you meet with your provider, you're both more informed and more likely to make decisions that are consistent with the medical evidence and consistent with your values as a patient.

That kind of environment is made possible because of the relationships formed between technologies, an open API and because of the permission and the things you choose to share, control, move and align with from your device of your choice. So that's a little bit of an overview of how APIs might work to change us from transactions to relationships. And now I'll turn this over to Kevin and he'll go into a deeper dive.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

Could you go to the next slide? So this is Kevin. Kind of what the story Leslie was relaying, while it's still in the future for healthcare, it's very much a reality for the rest of the kind of the consumer ecosystem. If you think about almost three-quarters of Americans are on Facebook these days and Facebook, it's telling your friends, your network, where you are. It's providing you feeds and information based on your preferences, what you like; and a lot of this is being done in the backend through APIs. So, as we move this consumer engagement and increasing this user experience for consumers and healthcare forward, the adoption of standards-based, open APIs is going to be paramount.

Rock Health is kind of a...one of the leading kind of think groups around digital technology, especially in health and their recent report articulated that in 2014 4.7 billion dollars was spent on digital health funding, of which 323 million was spent on consumer health technology. And that would be those things that are driving the consumer experience within healthcare. So there's already this growing trend, this tailwind, to increase the consumer experience and it's going to be done, we believe, through these open, standards-based APIs. Next slide, please.

So Gray is going to get into the nuts and bolts of what an API is, but I thought I would set him up with just a real quick, high level overview. I'll try not to get very technical here. In its simplest form, an API, an Application Programming Interface, is what allows two systems to talk, to communicate, to share data. It's the agreement between the two systems. Now when we talk about open versus closed, what we're really saying, open means it's public-facing, it's open to the public to use. Closed would be an internal, proprietary enterprise API. And then you get into the little nuances around proprietary versus standards-based.

But in that bottom right corner, that comes out of a book, API Strategy Guide by Daniel Jacobson, Greg Braille and Dan Woods. It's a great book; it's got technical as well as high level business aspects and just strategy around the value proposition for APIs. And that graphic just tries to articulate that value chain. And another way to think about this is, an API provides a set of building materials that other developers can use to create new, innovative applications. It's really trying to build on the old idea of $1+1=3$, you can take two valuable components and mesh them together and you get an exponentially larger value out of that. Next slide, please.

So, I think the thing that we get excited about when we talk about APIs is the innovation that it sparks, that's really what it's about. Most of us are using APIs today, behind the scenes, and may not realize it. So in the upper corner there, you'll see what...a mock-up of a log-in screen that most of you are probably familiar with. When you go to an application, you may be prompted to login with either your Google account, your Facebook account, some Twitter account, whatever that may be. Behind the scenes there, these companies like Google and Facebook have exposed an authentication service, based on a standard, the other applications can use to log you in to theirs. It's trying to deliver on the notion of single sign-on; and so that's one example of a standards-based open API.

Another interesting API that I think really kind of talks to the innovation is the picture of the map there. That is...I pulled that off as a screen shot off my phone; I was in New Orleans yesterday or the day before, and I picked the closest thing to me was an Exxon at the time. And low and behold, it pulls up the Yelp reviews. So here you have a map on an iPhone talking to Yelp through its APIs to get reviews on a gas station. I think that's innovative.

Now if you took that and thought about the healthcare scenario; you're trying to find an ER because your symptom triage tool said you probably need to go to the ER. It pulls up two. Not only that, it can get you the quality of service, it can get you the reviews, it can get you the wait times. It could...you could potentially accept or notify the ER you're coming in, they could have access to your records; all of this could be made possible through secure, open, standards-based APIs.

And then the bottom of that slide is really just talking to the growth; there's a huge amount of growth in APIs in the industry today, well over 10,000 now public APIs, probably...I've heard as many as a million internal APIs within the enterprise; those things that aren't publically exposed. But what I thought was really interesting as I was looking out at recent reviews and kind of studies is, CA Technologies just published a study of 1425 professionals who are...and 79% of those are exposing data via their APIs. And one of the top three reasons was improving customer engagement. And that's what we're here about is, how do we improve that consumer engagement in healthcare?

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

I think we also have a great opportunity with APIs to help to level the playing field in care. So for instance today in healthcare we will gather the language of choice for a patient. We also gather information about their health. As an education non-profit, we look to see and make sure that if the context inside an electronic health record or your phone might say, I am a female, age 57 with a primary language of Spanish; when that API connects to another application, I have the opportunity to see information in my native language. So there is this tremendous way to start to level the playing field with HIT by the use of the APIs.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

Next slide, please. So with the interoperability report we saw kind of an emphasis on APIs and there's already a huge amount of effort going on. Over time we've seen a lot of work around Direct messaging, Blue Button, Infobutton; those are kind of the starting points for APIs within healthcare. But recently the FHIR, Fast Healthcare Interoperability Resources, was just really about exposing healthcare resources using modern web technologies.

And then SMART Platform, which is an ONC funded project from a few years ago led by Josh Mandel and a few others, which I think at the very simplistic its goal was to bring a pluggable app kind of metaphor to healthcare applications and layer on top of FHIR those resources and services and standards necessary to create these kind of pluggable healthcare apps that could go into an app store; and just a huge amount of effort going on in those areas. Next slide, please.

Trying to just kind of wrap this up so we can let Gray take over; but I just wanted to leave you with one kind of I guess statement or kind of our belief is that standards-based, open APIs can and will spark innovations with the power to transform healthcare.

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

And with the consumer right at the head.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

And I guess we can turn it over to Gray.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Awesome, thank you guys so much, I appreciate it. I know I probably have a couple of questions, but I want to let Gray jump in and take over because I think he will answer some of them and maybe give us some more. So Gray, we'll turn it right over to you.

Gray Brooks – Senior API Strategist – General Services Administration

Sure, can you hear me okay?

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Sure can.

Gray Brooks – Senior API Strategist – General Services Administration

Right good, right. So, let me pull this up and then, are you seeing my screen?

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Yes.

Gray Brooks – Senior API Strategist – General Services Administration

Perfect. So there are a number of things that I want to touch on here and they're wrapped around this program out of GSA called the /Developer Program and we can make sure this URL goes out, but also if you make a note to go to bit.ly/govapi, that will get here. And so while we're going to touch on a few of these things, but they're representative, I think they're foundational and one of the things I want to emphasize is that you'll find me sometimes falling into my habit of referencing things specific to agencies or federal agencies, but I think they're foundationally always equal to just any organization or business.

That lesson kind of kicked off for us...when I first came into government about six years ago, I was working at the Federal Communications Commission, which is a relatively finite agency of about 2000 people. It has a mission that is fairly quantified. And what we realized was that across the website that had grown out organically over the last 20 years, there was...you could almost think of it as these chunks of information and functionalities that really you could actually quantify. So whether it was the Federal Communications Commission or the General Services Administration where I went next, in each case we worked with the agency to start to recognize that they had, at the end of the day, kind of a lot of information, chunks of information that we felt it was important to inform the public about this or about that or to make this information available to our industry partners and then also a series of functionalities.

So at the FCC you could file a consumer complaint or you could register an account to buy spectrum. You would need to report if you built an antenna over 100 feet, you needed to report that antenna. And so what we realized was that in each of those cases, there was a need and we were servicing that need through the Internet. But we were kind of the sole point by which people could benefit from that. So we started to recognize that there was a “crawl, walk, run” model that was at play here.

The crawl model we all know is, you think back 25 years ago and if somebody somewhere needed something, they could pick up the phone, they could write a letter or they could walk into the building and that's it, like that was the way that you could do things. And then in the 90's we see this transformation starting to happen where an agency or a company starts to create their website and use it as part of their mission. And so it was this amazing transformation where anyone in the world could actually do what they need to do with that agency from their desktop. And that was very powerful.

But the problem is, there was only one place you could do that and that was on the right page on the right website by the right company or agency. And what I'm encouraging people to recognize is to not get bogged down sometimes in the specifics or any of the technical speak of APIs, but to instead really embrace this transformation where the way to be successful is to allow anyone who wants to do something with you to be able to do it, no matter where they are.

You've probably heard it before, definitely the best example of this in government is the difference from the fact that I don't have to go to weather.gov to look up the temperature for where I'm at. So I go here and I can find out from the National Weather Service, information. But nobody does that because...is they go to Google or they go to weather.com or they have a Facebook App or a calendar App that pulls in the information automatically. If you think about it, in this one tiny area, government has utterly succeeded, at least within the technology empowered United States, basically everyone I think that we know, is happy and content with that small use case of I want to find out what the temperature is right now.

And that's because there's a plethora of options; there are a thousand apps they could choose from in their phones, there are any number of websites, it's just...it's there. And I think starting to see the difference between the functionalities where somebody can only get something right where I'm putting it to they can get it wherever they...to get it is really a powerful transformation that there's a lot to benefit from that. What some...in dealing with agencies, and again, agencies like organizations are I think just like any other large body of people, the statistical number of people who actually know to make the...or understand what it is is usually fairly low and that's because for everyone, it's not an intuitive concept.

And so this website that I'm going to pull up some things from and highlight them has a lot more information here than what we'll get to today, but I think a lot of its transferable to any organization. And it's because we found that the effective techniques for helping any group to start to understand this is...offering forums in communities where they can learn, follow the news and ask questions to make areas where people can collaborate on the resources, to make some tools where they can actually begin to do, to have resources which we've found from experience are often...come up again and again and again. And so we've used the open source model to build resources in such a way that it won't...people don't have to reinvent the wheel or, rather, rewrite the same document over and over.

Lonnie Moore – Meetings Coordinator – Altarum Institute

Yes excuse me Gray, this is Lonnie. It seems that you have lost connection, could you rejoin the Adobe Connect web space and then we can go ahead and get you promoted back, because we do not see anything shared right now.

Gray Brooks – Senior API Strategist – General Services Administration

Can we confirm that? It shows me still sharing successfully.

Lonnie Moore – Meetings Coordinator – Altarum Institute

No, we don't see you in the participant list.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Yeah, I can't see it.

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

Yeah, we can't see anything. So if you could refresh your screen, that might just do it.

Gray Brooks – Senior API Strategist – General Services Administration

Sure...and by the way, when did that start?

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Like a minute or so ago, so when you...I think you said you were going to go to another site and show us more than we could...showed some things and there was more there, that's when we lost you.

Gray Brooks – Senior API Strategist – General Services Administration

Okay, let me...give me one second.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Thank you. This is so helpful, too, by the way so thank you.

Gray Brooks – Senior API Strategist – General Services Administration

Oh definitely and thanks for being patient, sorry about that lost connection. So I'll keep kind of talking while I pull it up and then I'll let you know when I think I should be back on again. So the change that's going on here is I think starting...for any organization starting to conceptualize all of the information they have and resources that they offer, all the functionalities that they offer, and then helping them, you know, starting to ask that question of whether it is...is it available to third parties dynamically? All right, so by the way, I'm re-sharing again, can you confirm that it's starting to come through.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Yup, we gotcha.

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

We see it, thanks.

Gray Brooks – Senior API Strategist – General Services Administration

You haven't missed much, I've been scrolling down the page, basically. And so as we dive into some of these things, I think again, what I want people to take away from is asking that question of what...of all of our information and all of our functionality, how much of it is discretely available as a web service? And then, are we continuing to focus on ensuring that's not an afterthought but a fore thought to how we do our work because it really is a foundational shift in how organizations engage with everyone else. You know, kind of that disambiguation where you don't require people to come through your one place where you have information in order to be served.

Now clearly the...did I lose again?

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

You did, we can't see it anymore.

Gray Brooks – Senior API Strategist – General Services Administration

I apologize for this, you all, and here, let me...I'm going to switch to a Mobile Hotspot that's going to be more reliable.

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

Hey Gray, while you're doing that, can...this is Leslie, I'd like to put it a little bit in context.

Gray Brooks – Senior API Strategist – General Services Administration

Yes.

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

So let's say for an example we have a large health system with Epic, another health system with Cerner, a 100 different physician's offices with NextGen, athenahealth, you name it. And all of those today might communicate using messaging or using some transaction level system. But now let's add the consumer to that equation where the consumer has said, I'm Leslie and I would like my doctors to share information with my hospital and I'm going to give you some baseline information about me and join this group and have systems start to interconnect on my behalf.

So you begin to see the information being able to be shared dynamically and very, very quickly across systems rather than forming a document that needs to be sent from point A to point B, we now begin to share bundles of information that in turn have agreements of how those systems can relate so as I might enter in that appointment, as I talked about earlier, and it might be going to NextGen. Well NextGen then says, okay, Leslie's coming in for a cold and her values and her preferences demonstrate that she'd like to try everything before antibiotics. So I might be sent some information about how to determine whether antibiotics are right for me.

I then present to the physician office and the physician office feels confident that I need to be referred to a specialist. With that comes a bundle of information that starts to be shared and interacted with, so that at each step of the way, not only is a document being shared, but more importantly, relationships are being shared; who are my...what kinds of things am I involved in? Who has permission to share what? Do I want everything from my Blue Button shared in my Facebook account? I might. Do I want to have everything that is done on my HCAHPS score sent in to my PatientsLikeMe environment? I might.

So as we begin to think about APIs and how they really matter, it's being able to have much more movement of bundles of information on your behalf that allow new things, like supporting information, to be used along the way. It also allows for systems to be communicating together more effectively and for technologists to start to develop to very easy plug-and-play app stores. So I'm hoping that puts a little bit more context to this.

Gray Brooks – Senior API Strategist – General Services Administration

Yes, that's absolutely right and I've switched to a Mobile Hotspot which is hopefully going to start presenting my screen again. But just to build off that, a rough outline I would want to encourage people to take away is this, an API is a technical capacity, it's something that you need to enable for a system. However, the...it kind of...if you just have an API and don't tell anyone about it, for instance, then that doesn't do any good; it's kind of like a tree falling in the woods. And so what's at issue is, do you make the developer information available, either publically or to the right audience, and the other half is that you'll see...you'll hear the term a lot, and it's kind of the existential question of whether this is an afterthought and possibly doomed to not really ever take off or it's actually going to change the way your organization is involved in this ecosystem and that is, that you start to dog food your own API.

So there's an expression in technology and elsewhere of eating your own dog food. Some people prefer to say drinking your own champagne, that's understandable people would rather characterize it that way. But when you look at actually the APIs of Netflix, the New York Times, CNN, Google, Twitter, YouTube; all of these companies are at the front of the maturation process with APIs and what you see them doing is, they have become their own greatest user. So if you have a...if you have some database of information that makes for interesting...like an interesting app that the...that your customers might want to consume, the problem is too often people have said, okay, we should build that app, we should make a page on our website where somebody can look that up. And then maybe they say as an afterthought, we want to...we'll make an API available for it.

The real way to ensure long term success and healthiness is to actually build an API that accesses that information and become a user for it yourself; and so actually be consuming that. So when you go to Google.com and pull in a search query, if you actually looked at the URL, it is actually...it's actually consuming its own APIs that it also makes available for third-party developers. And so that's really what success looks like.

I'm going to just say, I'm very sorry about the connectivity, there are a number of the items on the page I was going to be discussing while pulling up...it would seem that I can't promise the screen-sharing, which I apologize for.

M

Just a suggestion...

Gray Brooks – Senior API Strategist – General Services Administration

Yeah...

M

That since it is a publically available page, someone on the committee might be able to pull it up and you could direct them what to show.

Gray Brooks – Senior API Strategist – General Services Administration

I think that would be wonderful. If someone is game, Lonnie or anybody else, to share their screen and I can kind of direct...around. But also, all of these links will be available and you can...I want to make sure people can actually get to them later, by going to bit.ly/govapi. So let me...

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

This is Michelle, so if you want to just give us a minute, Altarum, who is running the meeting, could go to the web page and bring it up. Lonnie, did you get the web address or do you need it repeated?

Lonnie Moore – Meetings Coordinator – Altarum Institute

Yes, if you could repeat it that would be deeply appreciated.

Gray Brooks – Senior API Strategist – General Services Administration

Sure, bit.ly/govapi.

Lonnie Moore – Meetings Coordinator – Altarum Institute

Slash gov...

Gray Brooks – Senior API Strategist – General Services Administration

So, bit.ly/govapi; bit.ly/govapi, all one word.

Lonnie Moore – Meetings Coordinator – Altarum Institute

All right.

Gray Brooks – Senior API Strategist – General Services Administration

So my apologies for that and yeah, let me know if you're able to pull that up.

Lonnie Moore – Meetings Coordinator – Altarum Institute

Okay.

Gray Brooks – Senior API Strategist – General Services Administration

So, there are a couple of particular items on this page that I want to highlight and the first is just in the collaboration section as you scroll down, you'll see a, you know, there's an opportunity for people to suggest anecdotes and examples of, you know, to explain what are APIs. And again it seems, I know it will be elementary to some people, but it's useful to try to help find the right way to describe APIs in such a way that it makes sense to the other people in the organizations and in your communities. And one that we've come up with is that it's like having a terrier that will go fetch for you. Another is that it's like the engine of a car, you don't necessarily have to know how it works, you just turn the key and it makes things possible.

I like the one where it says, APIs are like a bartender, you can interact with them to get information, you know, what beer do you have on tap? How much does it cost? And then you can also interact with them functionally, say, I'd like a glass of wine, and they'd give you a glass of wine. Some other people like to say APIs are like magic. But starting to find the right way to understand them yourself and in your own organization is really helpful.

The next thing I'd point out is, when you actually...if you go back to the homepage of the /Developer Program and go down into the resources section, there are a few components here that are relevant for any organization. In the resources section, the third link is the Agency Maturity Model and so this is a rather lengthy document attempting to describe this issue of starting to understand where your organization is at in the maturity model that goes up to, you know, from getting starting, kind of intermediate sophistication to advanced sophistication. And there's a lot here, but it talks about what does governance look like? What does integration within the agency look like? And there's a lot more there but it's relevant because almost all of that is not specific to government, but is rather relevant for us all, if you will.

So there's the...in the resources section there's the agency maturity model. Something else I'd suggest for looking at later is, you'll see there's an API release kit and then something called a /Developer kit and both of those are useful for looking at a layer and that's because the API release kit and /Developer kit focuses on what is actually...like the components that go with a release as an API. And so if you look at the API release kit, for instance, you'll see that it talks about how, you know, the documentation that goes along with an API; the idea of having contact info, an FAQ, code samples. And these things may seem either kind of obvious, but they're often where the actual rubber meets the road as far as if people are going to adopt your material. Because if you don't put effort into making this a developer friendly experience, then people won't use it and we see a lot of federal agencies kind of put out an API but not actually put any care or attention into incentivizing developers to want to use this, and that's really setting yourself up for failure.

So if you go back to the resources section, the other similar kit is the /Developer kit, and that actually gets to kind of what if...what the actual experience is like across...when you start having multiple APIs. And so in this case, you have...there's that question of do you have, for instance, a Spanish dashboard, an app gallery highlighting things that people have done with your APIs. And so with each of these things, I'd suggest going back and looking at them more because together they represent what a holistic and comprehensive API...starts to look like. And there are examples and a lot of these things are free and easy, it's just a question of deciding that you're going to do them.

So if you go back to the resources section, and thank you, by the way, for saving me and guiding us along here. There are two types of APIs I want to call out to be in your mind in the future. People often think of APIs as just about data APIs, but actually there are a couple of other forms that are really relevant. One is content API. So if you click on that, you'll see where we've started bringing together a number of resources for government agencies, and that's because we realize that the content of their websites is actually the...is actually one of their most important data sets.

When I think of WebMD, for instance, I know there's functionality, things I can query, but also it's the actual text in the page that I think is one of the most important data sets. And if you...out on this page, you'll see a number of resources where for...they're open sourced content management systems like Drupal and WordPress. We already have three solutions that work very well and if you keep scrolling down you see...you'll see some examples of problems starting to happen in government. And actually HHS is an agency that is at the forefront of making its content available as an API, and that's something to kind of bookmark for later because again, for information that's useful to the public, you don't want it to only be available in one place, you want it to be available wherever it's useful. And so I would definitely encourage putting a little plug and thinking more about the content APIs at HHS because there's an active working group there that's continuing to scale that out.

So if you click the back button and then go back to the resources...so if you scroll down a little bit more, there's one other...that I want to definitely highlight because it's roundly considered the part of the iceberg that's under the surface of the water, so if you keep scrolling down, there's a section on write APIs. And this is just a start but it's arguably where the most transformative change is happening and I think that's true not just for government, but for the healthcare industry as well. And that is, when you make an API that's not just a read API. So the, you know, Yelp makes a read API of reviews for businesses; and that's amazing because that means I can integrate that information with my data set somewhere else. But what's really powerful is when you start to allow someone to submit information to your systems through an API.

So a class example of this in a typically governmental lumbering form that's finally happening is, you know, the IRS has a well-deserved, you know, imperfect reputation. But it's much better because they've allowed trusted partners to consume an API for filing taxes which allows the businesses like TurboTax and others to come about. And when you start to unlock that ability for people to do what they need to do in different places, it's really transformative.

So if I want to maintain my personal health notes somewhere, it's important for me not just to only be able to submit them in one website, I should be able to submit them through multiple platforms. You want someone to make it so that people can add their information from Facebook, because maybe that's where they spend a lot of their time; or through a third-party website that maybe mashes up that note keeping with a personal diary and ancestry notes and other things. It's unlocking that ability to write information and not just read information through an API, is very, very powerful. And so I'd kind of plug that note for future...another time.

A couple of other things I want to just briefly highlight here that may be relevant for future. If you go back to the resources section on the left here, there are a number of things. API standards is something that my team at GSA call 18F works on and a few others are starting to work on where we are memorializing just very well-known standards. If you actually click on the 18F API standards and briefly scroll down them umm...they're not in depth, they're not, you know, a 50 page document, but we put in the effort to make sure that we were articulating a norm that we wanted to hold to, and there are a lot of reasons to why. And so if you're wanting a place to start, one very easy step to do is to review this document. It's in...so you can easily...your organization can make a clone of this and start to customize it for your own use, instead of starting from scratch. And we think there are a lot of good reasons to do that.

If you press the back button and go back two steps to the resources section, ah, let's see...the other thing I wanted to highlight was up at the top, the agency program checklist. Again, customized to government, but it's a pretty lengthy...if you kind of don't know where to go next, these are the things which the industry levers and the best practices kind of line up for you. And so it's just...it's a tick list that when you're getting started and as you're becoming more sophisticated, it's good to do.

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

Gray, maybe I could add some context. So there...an example might be that Cerner has a library of apps and their APIs and NextGen does and so an organization wants to start interacting, a programmer can pick something from that library, manipulate that information or that data in a way that interacts with their own application and be able then to put information back into their app store, another app. So it becomes really an opportunity to select and use and place information back into a variety of app store libraries in the health ecosystem. Just like Gray has shown us all these agencies, think of us in healthcare having different vendors, different providers and others with their own app store and our own ability to provide this kind of library usage.

Gray Brooks – Senior API Strategist – General Services Administration

Yeah, yes, I agree. So, let me...wanting to wrap up and get to the questions because I'd much rather, you know, help make sure that we are further articulating some answers that are for questions that people actually have on their mind. If you go back to the education section, actually, there are a number of resources here. In the further material, there is some recommended reading and I just posted, actually two links which might have come together, unfortunately, but there is a very good read here called the Secret to Amazon Success, Internal Services that again is foundational kind of in this realm and I'm putting into the comment section, as well, of this webinar.

And it comes from a very, very substantial host that came out a couple of years ago from somebody who worked at Amazon for about five or six years and then they went and they worked at Google for five or six years. And they talked about how the reason Amazon was so successful was this transformation that they went through in 2002 which is honestly is exactly what we're talking about here. And so it's a bit of a long read. There's the first link I posted kind of gives the summary, but I recommend it to you and for you all to share with others in your organization because it's a case study of how to take to heart this change and really do it thoroughly and well. And I recommend it strongly.

The last couple of things I want to highlight before we do Q&A, so if you go to the status section on the left here there are two particular sections that I think are very relevant. If you click on developer hub, so government is continuing to make...progress, and you can actually see that in action with a number of these things. Oh, that's unfortunate...I...this section might actually be only so good when it comes to this version of Internet Explorer. Hopefully you'll be using this in Chrome or Firefox or Safari or a newer IE. What it provides though is, there's a list of about 80 or so developer hubs in government and I think that sometimes the best way to internalize what this process looks like is to compare and contrast it.

Like I said, when you go to this page on a non...you know, on a modern browser, you'll see not just the...but actually about 80 other and its worth starting to think about the agency and the organization versus what they're putting out through their APIs and I think it's very relevant and interesting.

The last thing is, if you click on the community link, umm, there are a couple of things here that are relevant. The US Government API Listserv focuses on government is interesting for, I think, will be interesting for a lot of people; it's a good place to ask questions and to post if you, so for instance, if you want to get more feedback from people who use APIs in general, this working group, interoperability document and what it has to say about APIs, you know, that's a good place to ask. Also for those of you based in the DC area, there's very robust DC API Meetup that gets together each month. And again, you know, starting to collaborate in these areas and be present and talk about it, instead of it just being kind of an afterthought, an add-on to, you know, an existing mission, I think it's kind of what separates how successful something ends up being. So I'd recommend those for your consideration.

There's plenty more that we can talk about here and actually other examples we can show, but I think it would probably be helpful to switch to any questions and answers, if that's okay.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

That was terrific, Gray, sorry it took me a minute to come off of mute. This has really been helpful and I think that a combination of Leslie and Kevin's healthcare context has been really nice, too. So, I do have a couple of questions, and I'm not sure that I'm asking them the right way but, and I'm not sure which of you to direct them to, but I'm trying to bring it in to the electronic health record context that I think we're really considering under the Interoperability Roadmap.

So, one of the things that strikes me, as I'm listening to you Gray is, there's almost a fundamental assumption that when you think about the National Weather Service, etcetera, they actually want their data to be used, right? I'm not totally sure that's true, number one, or that that applies in healthcare. And so that's...I sort of want to understand why would some people go to an open API and what benefit is it to them and how might that apply to healthcare? Because I'm trying to understand at the end of the day, now that I get what it means, who would drive this idea? Does that make sense?

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

So Christine, let me make a first attempt then I'll ask the guys to speak up. So when you think about APIs there's the services APIs that say, we're going to connect to each other and we are going to agree to share the following structure for interoperability and selection of data and movement in data. Then you have the permissions that might be set by the patient that says, these are the things I'll allow you to share or these are the things I don't want you to share.

So there is the system to system connectivity that allows a programmer to say, boy, when I want to go connect with Cerner, I'm going to download their FHIR adaptor and I'm going to make sure that mine interacts in a way that's positive and based upon the open standards that they've set in FHIR and SMART. So there's that their interoperability, that data infrastructure that the APIs start to move; just like in your weather example, yes everybody wants to share it, but I might say the cities of interest to me are DC, Boston and Boise, whereas the cities interested to Kevin might be Las Vegas, Boise and New York. So we each define the movement and what's of interest to us, but the weather service and the app on my Galaxy and the app on his Apple all know how to communicate the weather and city selection.

So it's a group of services and permissions and functions that allows for an infrastructure of sharing and an infrastructure of movement based upon the end consumer or user use of that data in one instance. Or also the use of system to system; so on Amazon I might have a tremendous opportunity to share information about the shoes I select and that's shared with other organizations. So, think of it as services and permissions as well as applications that can be used together. Do you want to say anything?

Gray Brooks – Senior API Strategist – General Services Administration

So, and one thing I really want to clarify too that I think even I am sometimes at fault for promulgating, very often people associate APIs with open data and with that movement and the transparency. And that's...it's relevant, but I think that's a completely mistaken perspective because fundamentally what APIs mean are efficiency. So even...so don't ever construe what APIs might do with about making information public.

What's really powerful is thinking of the fact that if you have a business where there are perhaps 500 people who might need to interact with data with different levels of access and permission, do you want to have that be something which is only available by going through a person or would you rather that it is dynamically available on demand, however those people might need to gain access to it. It becomes particularly relevant when you're thinking across larger organizations or different companies. And so you're right, it's not necessarily a company might want to make the whole data set available, but they want to be able to allow innovation to happen with trusted partners, perhaps in a number of different companies.

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

So an example might be today...what Gray...is today I might have 500 interfaces from my health systems to other people and trading partners that I do, and each one of those is 500 individual interfaces. However, if I had an API model, I might have one infrastructure shared by all with different functionality that allows for different things to be shared or not shared.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

So, okay, so that makes sense, there's a difference between sort of sharing data and allowing interaction with data. That's what I took away from you Gray.

Gray Brooks – Senior API Strategist – General Services Administration

Yes.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

And then the second thing is...so I guess I can see a really interesting application when I think about what is happening in Stage 2 of Meaningful Use where we've created an ability for consumers to not just look at their data through a patient portal, for example, but to download and transmit it.

Gray Brooks – Senior API Strategist – General Services Administration

Um hmm.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

So the way I think that would get used is if there are applications that are able to interact with, consume whatever that information when the consumer decides that that's what we want to have happen. I'm also trying to understand kind of the business case for why...in other words, is it the p...you know, I'm going to ask this one last question and then I'll let others go. But, as you start to think about this, where is the hesitation in healthcare? Why haven't we done this much sooner? Is it, you know, are there proprietary issues with vendors that they're worried about? Is it, you know, docs not wanting folks to interact with their data? Like wha...how do we...where is it that a provider or vendor or another stakeholder might be hesitant on this model? Where's the landmine?

Gray Brooks – Senior AP Strategist – General Services Administration

So there's...

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

I think it's...go ahead.

Gray Brooks – Senior API Strategist – General Services Administration

Go ahead.

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

I think it's all of the above, somewhat. It's also that our technology in healthcare is legacy and older technology with a document-sharing history of 40-50 years through interfaces and it's the...so it's all of those things and legacy and technology barriers. So now what, through these efforts in open APIs, we've really added a new layer that can sit outside of an EHR that provides functionality to a much broader ecosystem and that's encouraging and very hopeful to EHR vendors who want to share but who want to make sure they're doing it in such a way that it's repeatable, inexpensive and efficient.

Gray Brooks – Senior API Strategist – General Services Administration

And just to clarify, so, everybody always I think feels like they're actually more behind than they are relative to other areas. This is a...this is finally happening in every sector, kind of just getting started. You look in the automobile sector and aside from like the Tesla automobile, like no other car's actually starting to do this yet. The Tesla's the first time you have like over-the-air updates fix your car. And in education, agriculture, all these things, we're just beginning to see this.

And again, in part for the same reasons that it is in government, it's somewhat of a difficult concept to grasp, like it's not intuitive what APIs are; but what I think we all are waking up to is the fact that our business models cannot be an island unto themselves in this world because if we aren't capable of being woven into the fabric of the wider Internet, then somebody's going to come along and eat our lunch. And that's kind of, I think, people have a natural hesitancy to appreciate that and to take responsible action as a result.

There's always FUD, you know, fear, uncertainty and doubt around issues like legal concerns, you know, branding, you know, is this going to...I'm giving my content away like that was my business model, page views was...I want people to come to my site. There are new business models that are possible from this and you won't, you know, the information that you have and the functionalities that you have could be more widely used so that more people need you and want you. And there are solutions to all of these things. There are not...the credit card system is using APIs to power the fact that I can use Visa on any website I go to.

So, I mean, there are equally significant security concerns in other sectors that are using APIs as healthcare and so there are good solutions. In fact what you're really doing when you start to actually prioritize your API program, is being intentional about how you're granting access to your data and that's something that you want to start going down the road of sooner rather than later so you'll become more cognizant and capable.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Yeah, thank you. That's so helpful and I think you just hit on the head, which is the business case for granting access is still a little bit missing in healthcare and we're working toward it; questions from other folks?

Nicolas P. Terry, LLM – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

Christine, this is Nick.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Hi, Nick.

Nicolas P. Terry, LLM – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

First, thanks to all three of you; that was really, really helpful. First a comment; healthcare APIs, albeit private ones, are already out there in consumer-facing healthcare, for example, in the HealthKit SEK for the IOS platform and there the consumer becomes the traffic cop at the center of the data sharing that Leslie described. And I think we have to bear in mind that there will be rapid iteration in that space, even as we're having these discussions.

But second to a questions, and I think to an extent it overlaps with yours, Christine. In the context of improving HIE and EMR interoperability, can our experts compare and contrast the type of app or system integration made possible by APIs and the data liquidity provided by something like FHIR or broader, standards-based XML data formats?

Gray Brooks – Senior API Strategist – General Services Administration

I'm sorry, what was the question?

Christine Bechtel, MA – President – Bechtel Health Advisory Group

I...

Nicolas P. Terry, LLM – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

So what's the difference...can you hear me or not?

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Yeah, I'm sorry Nick, it was Chris...I was interrupting you because I think I was going to suggest that Leslie also, and Kevin, weigh in on that; but, repeat that question if you would.

Nicolas P. Terry, LLM – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

So the question is, in the context of improving HIE and EMR interoperability, can you compare and contrast for us how the type of app or system integration made possible by APIs is different from or better than the data liquidity that's provided by something like FHIR or broader, standards-based XML data formats? So my question goes to what's the dif...how do APIs and data formats differ? And are those two pods mutually inconsistent or do they work together and how should we be approaching that?

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

This is Kevin...

Gray Brooks – Senior API Strategist – General Services Administration

So I can answer that if...Kevin, you can go.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

Go ahead Gray, I'll follow up you.

Gray Brooks – Senior API Strategist – General Services Administration

Go for it.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

I can follow you.

Gray Brooks – Senior API Strategist – General Services Administration

So, I mean, quick answer is, they're not incompatible, they are in...I mean, it's about...APIs are about enabling the transfer of information automatically, enabling people to...your trusted partners to be able to build things off your stuff. And they are able to do that more effectively if there are consistent standards for how that data is formatted. But sometimes people just focus on formatting the data but then don't automate the ability for it to move to different places with the right access and permissions.

Nicolas P. Terry, LLM – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

The way I conceptualize it is the APIs are more like HIE in that they open up the communication channels between the apps or the services. But the data format being interoperable is a different problem and the one that I think we're really trying to get to.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

Yeah...

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

They're hand in glove.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

Yeah, this is Kevin. Yeah, I think you're right. APIs in its simplest form is just a technology that allows us communication; you still have to agree on a standard set of resources and format. So for instance, FHIR, RESTful based API, modern technology still uses XML just like the existing HIE infrastructures do, the existing HL7 interface kind of approach that we've done for 30+ years.

So you still have to have that agreed set of resources and even bigger than that, it's what they're calling profiles within FHIR, it's just...it's one thing to have a resource but when you've got 100 optional data elements inside that resource, it's a huge amount of options. And so what res...profiles is it's this agreed usage; what does an encounter mean between multiple systems? And that profile defines how you're going to use that. And so same problems...

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

I think that what lessons we can learn from the consumer successes of API and the government's successes that Gray showed us is that choosing to do more constrained standards, less optionality means things happen much faster and broader and then as new things are needed, there's an organic growth that comes from that. So back to Gray's weather example, maybe the first opportunity was for applications to say, go fetch the data, the weather channel. Then the next is, go fetch the data from this...about these cities. Now I want to have a user choose a city. Now I want to have a user choose a city with an alert that's a text message. Now I want to have...so there are different opportunities for functionality and services that are added, but you first start with more constraint than I think healthcare is used to having. And that would be something for us to do as we look at these interoperability and say, what is the kind of that minimum that we want to make sure includes a consumer-centric view and not just a healthcare institutional view.

Nicolas P. Terry, LL.M. – Co-Director, Hall Center for Law and Health - Indiana University Robert H. McKinney School of Law

Thank you.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

This is Kevin...

Erin Mackay, MPH – Associate Director, Health Information Technology Programs – National Partnership for Women & Families

Hey Christine...go ahead, Kevin.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

Yeah, I wanted to comment on the HealthKit. That's interesting, you're right, Apple's come out with HealthKit, Google the Android has its platform as well and it's really this API on your phone that allows you to aggregate all of your health kind of data, whether it be coming from your Fitbit, your Jawbones, your RunKeeper app. What's interesting though is you're still missing this huge piece of data, which is your health record.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Right.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

So I think that that's where FHIR becomes very interesting is because while its being built as a standard API for EHR systems to talk to each other, we can piggyback that and allow now the consumers through HealthKit or Fit, their phone to access their EHRs FHIR server and then view, download and transmit their health records to their repository on their phone and really start leveraging those things...

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

Um hmm.

Kevin Harbauer, MBA, CPHIMS – Senior Vice President, Product Development – Healthwise

...through other apps. And so I think we have an opportunity for consumer engagement to kind of ride the coattails of what the...everyone's doing within the EHR space with FHIR.

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

It used to be that we had to find the business case to get an interface built to send something to a consumer app because those interfaces are \$10,000. So instead, if we have an ecosystem like this, it becomes a great equalizer for consumer-facing apps to integrate with health IT.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

That's awesome, thanks; that's a really helpful clarification. Erin, I heard you trying to...

Erin Mackay, MPH – Associate Director, Health Information Technology Programs – National Partnership for Women & Families

Oh yeah, thank you. So first of all, thank you guys, this was really helpful, a great example of the weather service, as Christine said, that was very sort of helpful to my own understanding. And I think I have a better understanding of how consumers can benefit from APIs in the sense of going and fetching data and having sort of the data they're looking for available via multiple sources. I think where I start to get confused is, how it works in the reverse, how patients are sharing data.

So, for example, I was recently diagnosed with a peanut allergy. Where am I entering that information, into what app or program or whatever so that I can share it with doctors across the care continuum who are all using different EHR platforms? I'm not sure I necessarily want my doctor to "fetch that data" from my Facebook App if I happen to have made a post about it. I'm just...I'm confused about how patients are going to be leveraging or using APIs to share their preferences and values, Leslie, all the stuff that you were talking about, how it works in the reverse, how that gets to our different healthcare providers. And what...especially if it seems to be happening in the background and as one person said, APIs are like magic, are consumers really going to understand like how and where their data is flowing?

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

I think that there's...we will see an explosion of apps and apps being able to work both directions in this ecosystem. And your example of data inbound to the EHR might have additional requirements. It might say, hey, we have to know absolutely that this is Leslie, so she has some sort of digital certificate that says, I am who I say I am; that she has a relationship with me as a provider. That we have established a relationship for data to come in and out and we begin to see then that data start to flow in.

Now it could be that the provider says, boy, I'd like to see, no matter what, from Erin's app that she has on her phone, she wants to share allergies and she wants to share her height and her weight and her location. She also wants to send her telemetry data. But she also wants to send me her Fitbit stuff and the provider might say, you know, I'm really interested in this but not this; I'm going to take that information in. So we will begin to see applications that start to do computable movement of data and computable privacy that starts to allow data to move throughout the ecosystem.

And so there might be several apps between my phone and three providers of my choice; but they begin to have a network effect as a result of it. It's not binary asynchronous communication; it's really the ability to have much more data fluidity based upon relationships and efficient use of APIs. So it will happen, it's unlocking the data; so we unlock the data and then we give a technical transformation platform, which the APIs, FHIR and SMART have the ability to start to bring to healthcare. And then we start to see the market evolve and change it. The consumer needs to be there because we're the only ones that can grant consent.

Gray Brooks – Senior API Strategist – General Services Administration

And to be clear, I mean, I really want to echo that you're right that it's not going to work for the way we frame it to them is like, trust us, it's magic. But, they...I think we've seen in other sectors, and we're going to see here, there's a different way of framing it where they want something that "just works." And they're going to kind of...and the way...we have to put in the effort to make that safe and secure and functional underneath. But peoples' expectations are rapidly evolving, that they want to...every time I have to still fill out like my medical history for the first time at a place, I'm now rolling my eyes saying, what is with this? And so us putting in the work on this is going to finally start to like catch up and keep with the pace of consumer expectations.

Erin Mackay, MPH – Associate Director, Health Information Technology Programs – National Partnership for Women & Families

Great, thank you.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

I think that's a great analogy. Thanks for the question. Erin, did you have a follow up?

Erin Mackay, MPH – Associate Director, Health Information Technology Programs – National Partnership for Women & Families

No, I'm all set, thanks.

Cynthia Baur, PhD – Senior Advisor, Health Literacy, Office of Communications – Centers for Disease Control and Prevention

Christine, this is Cynthia. Can I make an observation?

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Yes, but before you do that, I know we want to give more people time for public comment...or time to call in for public comment so can I just ask the operators to open the lines and then we'll continue the discussion; the folks at Altarum.

Public Comment

Lonnie Moore – Meetings Coordinator – 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.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Okay Cynthia, go ahead.

Cynthia Baur, PhD – Senior Advisor, Health Literacy, Office of Communications – Centers for Disease Control and Prevention

Yeah, so just really quickly, because I think this will come up when we revisit this in a couple of weeks, is that it strikes me that we're really talking about two different but related sets of decisions that consumers would have to make; so decisions around technology and then decisions around the actual healthcare that they're interested in and the healthcare choices. And I think we know from the kind of long literature in decision sciences that people typically go with whatever the defaults are; so I think this question of how the defaults get set in all these different technologies will become really critical in thinking about how those health decisions get...end up getting made. Because I think we have to kind of raise peoples' consciousness about how those choices could get very unintentionally or intentionally directed based on how the technology defaults are set up.

Leslie Kelly Hall – Senior Vice President of Policy – Healthwise

And remember the application sits on top of the API, so the user is looking at the application. The user is looking at the functionality they want to turn on or turn off. But the API is what sits underneath it that allows the infrastructure for communication interoperability and sharing.

Cynthia Baur, PhD – Senior Advisor, Health Literacy, Office of Communications – Centers for Disease Control and Prevention

Yeah, no, I get that but I think there's also literature on how technology ends up having a lot of unintended consequences because of those choices that get made in design and coding and what not and then it only becomes sort of visible later in terms of how some of those choices play out.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Thank you.

Gray Brooks – Senior API Strategist – General Services Administration

Yeah, I think that's why starting to make sure an organization is getting its feet wet and getting more familiar and comfortable with this technology is relevant because its...a lot of what you're talking about happens when an organization hasn't been starting to get used to a new paradigm.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Okay, so do we have any public comments and then I'll maybe issue one last call for burning questions.

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

We have no public comment and thank you for remembering to go early, Christine.

Christine Bechtel, MA – President – Bechtel Health Advisory Group

Sure. Terrific. Well, I just want to say thank you guys all for your awesome presentations today. Do we have any last burning questions before we wrap it up? Okay, well again, I think this was terrifically helpful, there were some really great takeaways, at least I know on my end I have a much better understanding about this is not about making data available to the public, but really interacting with data, you still need access and permission and you still need an agreed upon data format. But, this was really just terrific in helping, I think, all of us understand those key things and I want to just say thanks again to the speakers and also to you guys as workgroup members, I'm going to thank you in advance for now diving into the Interoperability Roadmap with us in preparation for our meeting in just a couple of weeks.

So thanks again everybody and we'll talk soon.

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

Thanks, Christine. Have a great weekend.