

**Electronic Health Records  
Meaningful Use & Public Health  
Virtual Event**

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**December 18, 2012**

## AGENDA

Time	Session Title	Presenter
12:00pm – 1:00pm	<u>EHR MU</u> : What is in it for Public Health?	<b>Dr. Art Davidson, MD, MSPH</b> <i>Director of Public Health Informatics  Denver Public Health  Denver, CO</i>
1:00pm – 2:30pm	<u>EHR MU &amp; PH</u> : The Local Implementation Perspective	<b>Jeffrey Johnson</b> <i>Senior Epidemiologist  County of San Diego  San Diego, CA</i> <b>Robert Wester</b> <i>Manager of San Diego Immunization Registry  County of San Diego  San Diego, CA</i> <b>Michael Coletta, MPH</b> <i>Lead Informatics Analyst  National Association of County and City Health  Officials (NACCHO)  Washington DC</i>
2:30pm – 3:30pm	<u>EHR MU</u> : Past, Present, & Future	<b>Travis Broome, MBA, MPH</b> <i>Lead Health Insurance Specialist &amp; Policy Lead  Centers for Medicare &amp; Medicaid Services (CMS)  Dallas, TX</i>
3:30pm – 4:30pm	<u>EHR MU &amp; PH Data Exchange</u> : Implications & Challenges	<b>Jim Daniel, MPH</b> <i>Public Health Coordinator  Office of the National Coordinator (ONC)  Washington DC</i>
4:30pm – 5:30pm	<u>EHR MU &amp; PH</u> : Getting Ready for Stage 2 Meaningful Use	<b>Jim Kirkwood, MPH</b> <i>Senior Director, eHealth  Association of State &amp; Territorial Health  Associations (ASTHO)  Arlington, VA</i> <b>Dr. Bryant Thomas Karras, MD</b> <i>Senior Epidemiologist, Chief PH Informatics Officer  State of Washington Department of Health  Seattle, WA</i>

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## **Introduction**

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Good afternoon to all of you on the East Coast and good morning to our friends on the West Coast. Welcome to the Electronic Health Records Meaningful Use and Public Health Virtual Event. At this time the link we are about to send all of you is for anyone who needs Closed Captioning. Otherwise, you can minimize the pop-up box you are about to receive.

My name is Sundus Adhi and I'm pleased to serve as your moderator today. As part of CDC's efforts to provide you with timely topics and expert speakers, we have with us today a panel of national experts who have kindly taken the time to share their views with us regarding EHRs particularly focused on Meaningful Use & Public Health Data Exchange.

## **Review of Agenda**

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We have very exciting presentations lined up so let me briefly walk you through our agenda this afternoon. As you can see on your screens, first we have Dr. Art Davidson, speaking to us about EHR Meaningful Use but what's in it for public health? Then we have combined speakers, Jeffrey Johnson, Robert Wester and Michael Coletta talking about EHR Meaningful Use and public health- the local implementation perspective. They will be followed by Travis Broome speaking to us about the past, present and future of Electronic Health Record Meaningful Use. Then we have Jim Daniel talking to us about the implications and challenges of EHR Meaningful Use and public health data exchange. Lastly we will have Jim Kirkwood and Dr. Bryant Karras talking to us about getting ready for stage 2 of Meaningful Use.

Before I introduce our first speaker I want to inform the audience that 15 minutes have been allocated for Q&A at the end of each session. You may type your questions in the chat box and the speaker will respond once he has finished the presentation. With that, I'd like to welcome our first speaker, Dr. Art Davidson:

## **What is in it for Public Health? - Dr. Arthur Davidson**

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*Dr. Arthur Davidson, a family physician, is Director of Public Health Informatics, Epidemiology and Preparedness at Denver Public Health. He serves as a member of a Federal Advisory Committee: the Health Information Technology (HIT) Policy Committee to the Office of the National Coordinator for HIT. He also serves as a board member of the National eHealth Collaborative and board chair of the Colorado Health Institute. He is an associate professor in the Schools of Public Health and Medicine, University of Colorado Denver.*

I want to thank the organizers for this conference and allowing us to have an opportunity to speak about Meaningful Use. Today I'm going to speak as a public health community member on the HIT Policy Committee and also as a public health practitioner. I hope to engage with my public health colleagues to focus on Meaningful Use opportunities as we see them. While there may be some mention of stage 3, I really am not going to speak much about that aspect as we have so much to work on Stage 1 and Stage 2. I will try to restrict my comments to what has been established with ONC and CMS through

rulemaking and not focus on what is going to happen. You may see opportunities where I talk about local public health agencies but they represent local, state, tribal, and territorial so I don't mean to exclude anyone.

Today some of the things we will try to cover are the following: First, we will just try to give a little context, and then provide Meaningful Use definitions, followed by a conversation on what are some public health reporting initiatives going around the country. Then we will talk about what the process of on boarding looks like and what it means to be part of a registry. Finally, we'll have some concluding remarks and then answer any questions the audience may have.

The first issue is to say that there is a problem on this slide from the organization for economic cooperation and development you can see that the USA spends more money on positive outcomes compared to many other countries and as you can see, we are getting less for our investments. So in response to that as you all know there's been an effort going on around the country and especially with federal investment and one of the things was back in 2009 when President Obama signed this in Denver- the American Recovery and Reinvestment Act. There were three key pieces of that which I think we should focus on. One is the idea that there was going to be this HIT Policy Committee where Meaningful Use was to be described and then the recommended to two agencies: 1) the Office of the National Coordinator that was much more fully funded compared to what had happened prior. 2) Also there was money put forth for the Meaningful Use incentive program that CMS was going to carry out the colleagues at ONC. As you can see there's quite a bit of money that ONC received but the amount of money for Meaningful Use incentives is much greater than \$2 billion and some projected that to be somewhere between \$27B to \$40B and so far we've used at least close to \$10 billion in Meaningful Use incentive funds. We will talk more about that.

What is Meaningful Use quickly simplified – it is use of a certified EHR in a meaningful manner such as e-prescribing. There is a requirement that also some exchange of health information and that the Meaningful Use eligible provider and eligible hospitals have clinical quality measures. If you're a Medicare provider you could get \$44,000 if you bill at least \$25,000 a year in Medicare cost and then with Medicaid you can get up to \$63,500 if you had at least 20% to 30% patients of Medicaid insurance.

What were the priority areas? Here are the five: 1) Improve quality, safety, efficiency and reduce health disparities, 2) improve care coordination, 3) engage patients and families in their care, and the one we're most concerned about in today's call is 4) improve population and public health and 5) ensure adequate privacy and security protections for PHI. These are the priorities that the policy committee decided would be important and these are the ones that the Meaningful Use work group went to work on and started to develop the measures and objectives.

As you can see in the slide here, the first phase of Meaningful Use was from 2011 to 2012, it was data capture and sharing. The next phase with the finalized rule which came out this year is for 2014 to 2015 which is about more advanced clinical processes. The final rule for stage three has not been developed and that's what we are now soliciting

comments in this request for comment from the HIT policy committee for this CMS rule that would be promulgated sometime in the next year to year and a half. That allows vendors enough time to build out the products to meet the criteria and measures.

So what are some of the measures that we see in Stage 1? I'm sure all of you are pretty familiar with this already that the ones in the lower right are in the menu set and that's the immunization registries and syndromic surveillance. These are measures that would be applicable to an eligible provider but here I'd like to point out what's on the left side of the slide that has been highlighted. In the core set of measures, those things that I've highlighted in bold and italics are vital signs, smoking status, demographics, and clinical quality measures. As we talk more about this during the next half hour or so we will be able to look at these and say, how do these apply more than to focus on these several things that are on the lower right that relate more to public health?

So if we go into one Meaningful Use public health objectives are we can see from Stage 1 that you had to have the capability to submit electronic data to immunization registries but you only need to do that as you can see on the right-hand side you need to do one test of that in Stage 1. Or you needed to submit electronic laboratory reportable data but you only needed to test that one time also. Finally, submit electronic syndromic surveillance data and that was all just one test. Whereas if we go to the next slide which now will move us to Stage 2 objectives and measures, you can see that those same things are on here now they are core measures and there needs to be successful ongoing submission. So public health agencies are having an opportunity for successful ongoing submissions to use that data on a regular basis for these three core objectives in Stage 2.

In Stage 2 there were also some menu objectives, the last one was the core objectives and those apply for Stage 2 to hospitals but in terms of eligible professionals, they also could be submitting electronic syndromic surveillance data, but that's a menu item. Then there's also the idea that you could report cancer cases and that also will be a menu item or that you could report specific cases to a specialized registry on an ongoing basis and I want to focus on this last one because that's where I will spend most of the talk about specialized registries and how there were several places around the country and our health department that's working on this most specifically. We will spend more time talking about that last specialized registry category.

Where are we at? We've actually done pretty well as I mentioned. The program has been going on now for about two years and these estimates from a report from CMS in November to the HIT Policy Committee and you can see that there are quite a few providers around the country since the launch of the program. Nearly 200,000 providers around the country have been recipients of Medicare or Medicaid payments. Just wonder how many are in your community and how you think about using what they are now collecting in their EHR. They've been incentivized as you can see in this slide to the tune of nearly \$10 billion so far. Quite a bit and has gone out to hospitals and how are you expecting to use those new data sources in your communities?

In addition to the Meaningful Use program, there have been efforts within ONC to promote greater use of these data by the public health agencies around the country. Between ONC and CDC, there's been the effort to create the Public Health Reporting Initiative and there are two key things that have come out of that initiative: 1) An effort to harmonize the data element profile and 2) An effort around the clinical document architecture and implementation guide - this is what we hope to be a consolidated clinical document architecture that helps us achieve much more with one framework to serve many different public health use cases. These two efforts have been primarily based on the Cancer Registry reporting standards that we have seen promoted in Stage 2 that I mentioned earlier.

They are also looking at the national healthcare safety network which is recommended in Stage 3 as another method for sharing information with a registry in this case, one that would collect healthcare acquired infection information. Advantages to this approach are that it does not require any change to the current efforts around reporting for electronic lab reporting, immunization registries or syndromic surveillance, but it does provide a future path to reusable modular architecture for an extensive methodology that could be leveraged for current or future reporting needs, like a communicable disease case reports or chronic disease reports or products safety reports or birth and death reports. All of those are different use cases that would be able to use the two key efforts above, the harmonize data element profile and this consolidated clinical document architecture. The whole idea of this is to find more generic interoperability between EHR and public health surveillance systems.

What do we think that is required for success? I think one of the things is what we are doing today – get CDC's leadership to support this initiative with pilot implementations to share the message to bring forth from full scale implementations and to promote and contractually encourage broad health department migration to the new approach of this reporting initiative. ONC and CMS have been collaborating and have proposed rulemaking and tool building to assure that these products (i.e. harmonize data element profile and consolidated clinical document architecture) are maximally aligned with ONC convened standards and interoperability framework. Finally, I think local and state health departments and tribal and territorial should review and advise what they think about these things to CDC. We need a strong local orientation for this advisement to CDC. How Stage 2 changes local health departments' obligations and opportunities and we will talk a little bit about that in a second and how Stage 3 may set a new foundation for Public health monitoring and I think that input is essential.

In Meaningful Use the RFU exclusions and one of the things that we will get to is to talk about on boarding but if the public health authority does not have the technical capacity or does not have the resources to support ongoing submission in Stage 2, an eligible provider may receive an exclusion. Or if a hospital has to do a few things to get to that point, they need to register to submit, they need to be in the process of testing and validation or maybe awaiting an invitation to begin submission and those things would qualify as “in the process of” and not necessarily be defined as an “exclusion.”

Here are what we now believe are important steps, emerging processes for public health authorities in Stage 2 for onboarding. At first, the public health authority needs to declare, needs to let the community of eligible professionals, eligible hospitals, and CMS know what Meaningful Use objectives are being supported. Then after that is done, the registration of intent needs to happen by the eligible professional or hospital - they need to register with the public health authority and indicate its intent to achieve a specific Meaningful Use measure. Then the Public Health Agency has to go through and on boarding process where they might queue and register each of those professionals and hospitals for exchange and then receipt of the information. How well each public health authority define ongoing submission criteria? Finally, the Public Health Agency needs to acknowledge that the professional hospital is achieving or has achieved on boarding and meets the criteria for ongoing submission. So these are steps that public health agencies need to begin to think about. As I mentioned this is not going to happen until 2014, but things that we as public health agencies at any of those levels might need to be able to say, we have a plan to make these happen.

This is just a diagram of what I just described. In the center it describes again that you must register intent by a deadline, you must participate in the on boarding process, and you must respond to written requests for action. So at the top of this on the left-hand side you register for intent. If the Public Health Agency is capable than you continue down the path. If they are not, then you get this exclusion and the professional hospital has no need to continue with that activity if their jurisdiction provides them with that exclusion. But if they are capable then the Public Health Agency may ask for some actions and the provider needs to act. If they've done it once and failed, then they get another chance to do it. If they haven't succeeded on a second round they will be considered failing in that Meaningful Use objective. If the provider acts and is successful then the Public Health Agency will onboard. If the Meaningful Use objective is met then you get your letter for attestation. You can see there's this process - this on boarding process is being defined by many in the public health community. This slide I borrowed from work that's going on within JPHIT, the Joint Public Health Informatics Taskforce.

So we have some challenges. Now that we have to do all that work to bring people on board and then we get all these data, we will be swimming in an ever deepening pool of data. And often we have little technology to efficiently use data converted to available information, and I think there's a mandate as well to have our staff feel like we have a direct relationship with these new data so these are significant challenges that we will be facing as a public health community.

However the opportunities are great:

- Harness resources for very precise decision-making to help improve population and patient outcomes.
- Ensure better organizational readiness and increase information to support our mission
- Enhance access to relevant actionable information through reporting and dashboards
- Better monitor the key performance indicators to make better informed decisions.

I think this slide helps me to think about this is that we have on the right-hand side personal healthcare and you can see the very bottom electronic health record. There are providers out in a community and community residents that have a desire to connect to an EHR and allow that EHR somehow to move to the right where it serves population surveillance. This is what I consider sort of the fundamental process of monitoring the population. We have on the left-hand side, public health employees and public health programs that want to create what I call or what Gibb Parish and Dan Friedman called the population health record. This is where the information exchange is taken from the EHR and it serves the population surveillance need and that in turn can go back to inform personal healthcare to a variety of mechanisms that are happening at some places in the country.

To think about this in a little more detail and to go back to that stage 2 Meaningful Use specialized registries, the way that we are conceptualizing this in Denver is as such: an eligible provider has from their EHR created some sort of standard data warehouse. So here we have at 12:00 a standard data warehouse and at 3:00 a standard data warehouse and somehow in the middle of the cloud there is a query service that allows us to do a secure federated query that we ask a question and a standard way of both standard data warehouses in a secure manner and retrieve results. That could be as you see in the lower left, public health has a secure portal to allow it to see this standard data warehouse at a provider or eligible hospitals site. This is the way that we have conceptualized the work here in Denver and I'll get into more detail about that.

In the meantime through ONC and its efforts to act on many fronts, one of them is the Query Health effort to actually build out this population surveillance and population monitoring tool and there are currently five pilots going on around the country:

1. In New York City which is around chronic disease and reportable diseases and syndromic and disease.
2. There's another one going on in many places around the country through the work of Harvard Pilgrim and HMO Research Network called the FDA Mini-Sentinel with over 126 million covered lives being queried through this standard data warehouse for diagnoses, drugs, and procedures.
3. There's another one through the same group of Harvard Pilgrim supporting the Massachusetts Department of Health with a MA Leagues of community health centers and Atrius health and they are looking at influenza like illness and diabetes surveillance.
4. We have one out of the CDC, the BioSense 2 that many of you probably are participating with in this cloud-based system and the recent funding for that.
5. Lastly there is Allscripts and MITRE group working on how the quality measure formats. Something that's been proposed by HL7 as part of the clinical quality measures reporting for stage 2.

The our efforts around the country to produce results from the pilots to help us inform how we move forward both in Stage 2 and Stage 3 and how we get to what we call the learning health system or healthcare system through Query Health Activities.

I'm going to now focus on some of the activities going on in Denver. One of the reasons why we focus on the specialized registries is that we received a grant, this community transformation grant, which is from the CDC and it is focused on heart disease and stroke for us and it is to promote healthy lifestyles especially among population groups who experience the greatest burden of chronic disease and it is really focused as well on targeting a reduction in health disparities. It's a five-year grant and this Community Transformation Grant (CTG) has put out over \$100 million to over 61 states and communities serving 120 million Americans. This is the context for us thinking about building out a registry in Denver.

In Denver we were focused on the national quality strategies, the cardiovascular disease priorities and here you can see there is a focus on the effective prevention and treatment. The opportunities for success were around increase blood pressure control in adults, reduce high cholesterol, increase use of aspirin, and decrease smoking. How would we monitor that over time? To do that we would look for measures that you could take out of an EHR so the measures might be for someone over 18 with the ischemic vascular disease – what was their most recent blood pressure and was it below 140 over 90 or was there a low-density cholesterol less than a 100 or is there evidence of use of aspirin or is there evidence that they had smoking cessation services either medications or quit line referral provided to them.

In our community we look at this as sort of a cascade, there are people all the way on the left who are unaware of hypertension and all the way on the right who are fully engaged in hypertension care. What you need to do is take people who are out in the community and link them to care from the left-hand side to the center and then from the center move them over to the right where they are having more quality. Some people may be unaware, some people may be aware but not in care. We try to link those some may be receiving some care but not hypertension care, some entered some hypertension care but that lost a follow-up, and some may come out of care and we have people working at the local level - their community health workers- trying to find them. Once they get to the system we have patient navigators and clinicians and patients and systems to try to keep them in care and move them over to the quality side.

Here is an example with hypertension. This is Denver health and you can see in this slide at about 3:00 there's the public health department where I work with my colleagues. But there are many other pieces to Denver health, a 9-1-1 system, a hospital with about 20,000 admissions a year, trauma Center with about 3000 serious trauma cases, family health centers with about 350,000 visits for a quarter of all of Denver, health plan with 10,000 patients and regional care center, correctional care center, school-based clinic with 12 clinics, are variety of services that are provided all across the healthcare spectrum. All of these exist inside of a Health Information Technology framework. What I see this is maybe a little prototype of what we might expect to happen in a true learning health care system where information is shared between the various components. It is easy for me to say that because it is all under one umbrella, we have one CEO and it is one information system, but the idea here is that there will be registries developed from a variety of

sources and from these registries we can then go ahead and generate some information. For instance, in this next slide and I will spend time so you can see this. This is a slide of hypertension by Census Tract and you can see that darker areas have higher rates of hypertension than lighter areas in this map of Denver. But you can also see some cross patched areas where Denver health does not take care of a very large segment to the population. Even though I can create a registry of hypertensive, it doesn't mean I have all the people in here and one of the things that we need to do is bring more data into this to allow us to then see a more complete picture for Denver. To do that we have five sites that are contributing patient data to a federated query process. These sites are able to then give us additional information about their hypertensive, smoking status, or their rate of obesity. We are then able to take the information geo-located and map it as we had on the previous slide.

This slide now describes once again what we see. You can see in this area that's highlighted in black, the same thing we saw it in earlier slide about a specialized registry. Here we have data in the box in the middle at the top from Denver health but then we have data from several other partners from the box on the lower right where data from hypertension, tobacco use, secondhand smoke, obesity and hypercholesterolemia are put into a warehouse, a standardized warehouse. In our instance we are calling this our virtual data warehouse following the model that Kaiser Permanente has been using for quite some time and that was referenced in the slide about Query Health pilot sets. There's a way here for us to bring data from the community into an environment to create a specialized registry that serves the needs of our community with our CTG grant, this community transformation grant, that CDC has so graciously offered to us over a five-year period, but there's another activity going on from NIH where clinical translation science awards also have a need to produce these registries for the purposes of research. Here we've tried to combine our efforts and that's what this Colorado health observation regional data sharing project is about. That's an NIH funded project and we are trying to take what are the resources in your community and how can you leverage them to support your public health surveillance needs? How can you explain that to an IRB so that at one point you can get these data because the HIPAA rule allows you to conduct public health surveillance while in another case even though using the same infrastructure you need to go to an IRB because it is actual research.

The next slide is just this description that Dan Friedman and Gibb Parish have provided to us and I made this animation where we have data collection on the left that goes into a data set that's once again that's standard data warehouse. It allows us to generate some precalculated information that someone on the right hand side can securely who's been authenticated have access to and read those precalculated reports. But if we in this green line have this on the fly query as Dan and Gibb have suggested that the public health department on the right-hand side, the secure authenticated user, could do a query and bring back results to the population health record on-the-fly. So now we have a way to do standard reports and on-the-fly reports using the same infrastructure, and once again on the lower left-hand side you can see there are variety of domains that are being addressed in this population health record and you can think of others that pertain to your community.

All of these are really leveraging the core set of measures that were not in the immunization syndromic surveillance and electronic laboratory reporting. I think we all are creative enough of think and how to use. I'm trying to suggest how we get to that idea of specialized registries in this part of the conversation.

What are the things we need? We need to achieve interoperability and that's taking some time for us to achieve and the technology is only one obstacle to that interoperability. We have to continue work on policy and building trust in community so that the workflow can be established. I don't think the technology is really that hard. We do have some technology things for us to work on. There are four levels of specification on interoperability: We need to define the workflow; We need to work on messaging; We need to define the format of the message and inside the message we need to define the vocabulary used to be transmitted and the Public Health Reporting Initiative (PHRI) is working on all of that. We then need to move that out into stages of standards development which I think we are getting close to. I think that community is trying to work on setting forth some standards and we need to work on product development with the vendors and finally we need to then have that deployed. For each of those phases we need to 1) Decide about proceeding, 2) Allocate resources, 3) Develop it, 4) Validate it and then 5) Deploy it. I think again with the leadership from CDC we are beginning to see an emphasis on how can we get these things to happen in the near term so that we can positively impact the way that Stage 2 is rolled out and can be advantageous to public health efforts and all the communities across the country.

This is just an old slide from CDC about this concept of a public health grid and it think many of you have probably seen this but the idea is that a Public Health Agency which would be sitting up in the far right, we would be connecting to all these other players and being able to use the data and share the data that we've aggregated in ways that have before been fairly difficult to achieve.

I'm going to end with a couple of slides here; I know time is running short. This concept of learning healthcare system was first developed or at least elaborated in detail by Institute of medicine report back in 2007. This is a list of the attributes defined in that IOM report. We could spend time on all of them but I just want to focus on the ones that I've highlighted in blue which include the following:

- Digital technology.
- Technology that can serve to support continuous improvement.
- Health information that's reliable
- Secure and reusable resource,
- Data utility where data are stewarded and used for a common good

These things need to be part of this local community assessment of what it is we are trying to achieve with these specialized registries. These specialized registries may for some specialties be something that occurs at the national level, but for most of us in public health, we're going to want to figure out how can the specialized registries actually help us to achieve our essential public health services.

In this slide I just want to point out that I think that as we start to go down this path we should be very deliberative in our efforts. We should be focused on what do we strategically want to achieve because if we understand what our strategic goals are and we understand our business processes and the system requirements that should then drive our investments. We shouldn't spend money on things that don't match our strategic planning. This slide from the Public Health Informatics Institute shows that once we know that strategic objective and begin to invest it's very much held by the enterprise architecture. I go back to that slide where I showed you where the CTSA (Clinical Translational Sciences Award) and the CTG (Community Transformation Grant) both have the same strategic objectives, they are looking for ways to bring together data from disparate and heterogeneous resources, data sources out there. If we could decide on a common architecture, this enterprise architecture, we can gain much more in our investment because we're both from several or maybe multiple, dozens of other sites are working towards that same enterprise architecture. It of course needs to be managed and the portfolio performance needs to be optimized, and we should then decide how that then goes back into our strategic planning process. At the center is the governance and management process.

I'm going to end with these conclusions:

- There are large-scale public health challenges. We have a system that doesn't give us enough value. We have chronic disease epidemics. We need new tools to successfully monitor key performance indicators. I think Meaningful Use supports that.
- Public-health needs to focus on building multipurpose tools and infrastructure to support several projects and programs. Meaningful Use presents a practice opportunity for multipurpose tool development and infrastructure.
- We need some strategic thinking and that's essential during these periods of limited resources. We have very limited funds available at the current point to build out much and we need to work together to strategically define those enterprise solutions. During stage 2 local public-health (local, state, territorial and tribal) capacity will be challenged and here's a real chance for Meaningful Use to promote an opportunity for us to work across agencies, across jurisdictions to improve surveillance and create more real-time access to actionable information.

So I will stop there and see if there are some questions. And I turn it back over to our leaders.

Thank you.

## **Q&A**

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To respond to the question about the majority of infectious disease reporting, I think that's really back at the point of, can we get this public health reporting initiative to get traction? We will not achieve everything in the first go through, but if we can achieve a reusable architecture where we have harmonized vocabularies and a consolidated clinical document architecture I believe we can achieve ultimately a tool that would at least allow case reporting; maybe we won't have all the detail for every type of case as there are so many nuances to each disease, but at least we could establish case reporting as Mark

and Shawn did in Indiana and they found that you can get four times as much reporting in about 1/7<sup>th</sup> the time to get it reported.

**Q:** Do we need to prove that we can do stage 2 measures everywhere in order to advance new ideas for Stage 3? Are their pilots for stage 3?

**A:** I think very much that there are pilots that the CDC is working on at this point. At the PHRI effort from the Joint Public Health Informatics Taskforce has been sort of put into a faster gear with the desire to have these pilots tested sometime between now and late May when we anticipate that there will be a next iteration of the recommendations to ONC for what are achievable, feasible Meaningful Use objectives for Stage 3 regarding population and Public health. So I don't think that we need to achieve everything for Stage 2, we won't even have stage 2 start before we are going to be trying to finalize much of Stage 3 suggestions to ONC and CMS. So I don't believe that they need to be completed before we can move forward with new ideas for Stage 3.

**Q:** Can you go back to the slide on Query Health and say a little more about the last one?

**A:** Actually, Jim Daniel is probably better at talking about this than I am but I will go back to that slide. I really went through this slide quickly and I have to say that there's some wonderful groups out in the lead, the first one, New York City has been doing spectacular work in this area so interesting to hear what they've been doing over the last 10 years with the primary care information project and how they've taken that to a new level around chronic diseases in New York City and also about how they have an example in one study where they were able to recall people who were exposed to a less than fully adequate dose of metronizol because there was a recall on that drug. I think they've really done some wonderful things and as I say the fact that we can actually query 126 million lives is wonderful for this mini-sentinel study out of Jeff Brown and Rich at Harvard Pilgrim. On the last slide there is an effort to develop this health quality measure format, the system for reporting these clinical quality measures. Inside of the core measures is a need to report on clinical quality measures and I don't think we know enough about how to do that well yet. We're certainly working on that and in this pilot I believe that Allscripts and Mitre group were trying to test out this health quality measure format for Stage 2 clinical quality measure reporting. I hope that Jim and his talk later on will be able to deal with that.

**Q:** Will public-health state agencies provide attestation to submitting agencies to the state Agency?

**A:** I'm not sure fully get that, but state agencies could declare what they will do as well. What are their capacities? The state agency could receive the immunization data and as in my state the local agency, Denver public health is declaring its ability to receive syndromic data as part of our work with BioSense but the state hasn't decided to put up the syndromic surveillance registry or reporting system or cloud-based system. So the state could be providing one level of attestation around immunization and then the city for a hospital in our jurisdiction could be providing the attestation for another Meaningful Use measure such as syndromic surveillance.

**Q:** Are there any estimates for the percentage of public health agencies expected that are able to receive Meaningful Use objective reporting by 2014?

**A:** I really don't know the answer to that. I think that the best sources of the information would be probably ISDS for syndromic surveillance data, CSTE for electronic lab reporting, and AIRA the American Immunization Registry Association. They all participate in JPHIT.

### **The Local Implementation Perspective – Part 1 – Jeffrey Johnson**

*Jeffrey Johnson is a Senior Epidemiologist at the County of San Diego, Health and Human Service's Agency. He directs a team responsible for public health surveillance and bio surveillance projects. He currently helps coordinate and integrate surveillance activities between local, state and federal agencies and is a member of several local, state and federal surveillance committees and workgroups.*

Good afternoon. I'm going to be talking about our Meaningful Use experience here at a local level at San Diego County. We have a team approach here. I'm going to be talking about syndromic surveillance and electronic lab reporting and then I will turn it over to Rob Wester who will talk about the immunization registry. This is a new technical setup for me with a software system so I apologize for any technical difficulties and my contact information will be available at the last slide of the presentation.

Okay, to begin with our context, we are a county organization here. We are individual public health Agency. California has a lot of counties and each of these is their own local health department. We have her own local health authority and we are responsible for our three and half million people population and we are located next to the border of Mexico. Just to give you some idea of our healthcare systems, we have 17 civilian acute-care hospitals, 2 military care hospitals, a number of large healthcare systems, multiple practices, large network and community clinics, and so forth. Many people come to San Diego for progressive treatment for their conditions or conditions; we also see a large population of tourism to San Diego.

San Diego has a history of doing syndromic surveillance for nearly a decade and so currently we have a number of hospitals that are connected. Some of these hospitals are connected sending HL7 messages and so that's kind of in progress. I will talk about that more in a minute. We also have a history of electronic lab reporting that feeds directly into our disease registry. We have a number of labs that are live, transmitting HL7 base messages to our electronic lab reporting repository. One thing to note about San Diego County is that all our IT is outsourced that presents opportunities but also challenges and the challenges as it relates to Meaningful Use for San Diego is that it is hard to set up networks and servers, hardware, and connections and that does pose challenges.

Just to give you some perspective, these are some of our guiding principles or values as we approach the Meaningful Use landscape. We know that the Meaningful Use at the federal level and all levels is consuming us in many ways and we want to basically approach this as opportunities, as potential to explore our options, and so we are dedicating staff time and energy to keeping at the forefront of our knowledge base or mental desk top on Meaningful Use. It has been quite an evolution. We're also wanting to build and expand into Meaningful Use we can expand our foundation of syndromic

surveillance and electronic lab reporting and I do want to note, we have a number of the partners in place, they are some of our existing vendors for electronic disease reporting, electronic lab reporting and syndromic surveillance; we have good partners in our healthcare community with our hospitals here and so forth.

We know the informatics is changing the way public-health does its practice and we know that this is an evolution with many paradigm shifts so we are trying to keep up with this; we are learning all that we can; we are trying to understand the interpretation of the different ONC rules and information. As it relates to the learning curve, it is a lot of reading, a lot of review, a lot of webinars like most of us and so we are kind of in that group thing with Meaningful Use.

I will just talk about a couple of our processing steps. When a health care entity approaches us they say they are ready to begin exploring Meaningful Use we basically send them a registration kit and I will talk about that in a minute, but we basically put the ball back into their court to fill out some information and give us some information that helps us take the next steps. Once we receive their completed registration then we review with information on there and make sure it is complete and contains all the information we are looking for. We log that and we prioritize the work with health care entity and so for example, if hospitals we're going to prioritize them at higher level than maybe a small individual possible provider in a small rural clinic just because the volume or the resources that we have and that they have to work on that. In most cases after they register and we begin working with that health care entity, inevitably we have to work with their EHR vendor and many times the person that's doing the registration form at the healthcare side does not understand their EHR system or HL7 messages so we try and connect with the EHR vendor where possible. Some of the larger systems are utilizing large certified EHRs already and so many times our conversations with the technical vendors are actually they may be located on the East Coast and we are on the West Coast so a lot of times their work has been done and it is pretty smooth but other times it is navigating the technical people and contacts within the health care entity.

We go through a two-step process in the testing and the first thing we do is we like to ask them to send us through e-mail just a sample message so we can review the format and basically look at the content of the message to make sure that first of all there is no confidential information in a test message and also to make sure that HL7 messages are correct. A lot of times they are sending us messages that are not meaningful or not technically meeting our requirements. Then finally when we're ready to initiate a test message that we have them send it to us electronically to our one of several options and I will talk about that in a minute. Once we get the text message we review the message, review the test, review the outcome of that and we will confirm back to them in writing what the results are and then we will log it internally for internal tracking purposes.

This is our registration kit. We send them basically a registration form that collects Information about their points of contact- both health care entity as well as their technical point of contact. It also collects information about their typical volume and volume of encounters at their facility, and then some of the information about the version of HL7 that

they are on and so forth. We also send them some of our criteria for Meaningful Use and this explains our process of Meaningful Use testing as well as the outcomes that could be potentially determined at the end. Then we send them an HL7 implementation guide, this is our document that breaks down the entire HL7 message that puts into a technical spec requirements for the HL7 message, the ADT messages and so forth. This is based upon some of the other existing work both by CDC and ISDS and we have a local adaptation of that. We also send out some syndromic surveillance minimum requirements fact sheet. This allows them for Stage 1 testing to only transmit a valid field for us as a smaller subset of fields, data elements. And allows the testing to go a little quicker and also reduces a lot of the back-and-forth between the EHR vendor and us on getting some of those odd data elements set up initially for Stage 1 testing. Finally we have our ELR implementation guide for those who are pursuing electronic lab reporting testing.

Doing the test: So we have not done a whole lot of hospital tests because here in San Diego we have a local Beacon health information exchange and we have taken the stance that we would recommend all the hospitals to send their results through the Beacon HIE. Since this is still in progress, we anticipate by late January to stand up a Meaningful Use test server within this Beacon cloud which will allow the hospitals to transmit their Meaningful Use test messages there. What we are doing in parallel is working with hospitals with their message format and message structure until that server is ready. We anticipate that in the next 30 to 45 days.

For some of the eligible providers, we give them several options of doing their test - it could be an automated e-mail sent to us, it could be to an SMTP domain, or dropbox. We also have one of our vendors for disease reporting, electronic lab reporting, and syndromic surveillance and we have it so that they could also receive messages and do some analysis and review for us.

But I have to be honest, we have not received a lot of requests for Meaningful Use testing and I will talk about that in a minute, but when Rob talks about immunization in just a minute, he has received the bulk of the healthcare community's interest in Meaningful Use and so we have also been working with most of the same ones he's working with and so forth. Let me move on to the diagram showing what we envision our public-health surveillance Meaningful Use server located as an Edge server on the cloud or Beacon. The hospitals will eventually send us their Stage 1 test results through here, but also long-term as Stage 2 HL7 test messages.

As for the current status over the last year or so, we've received 63 registrations and basically you can see the results here for the syndromic surveillance. We passed one. We've not passed 29 and these are basically what we call quasi exemptions to buy some time for them. Additionally, some of these are also specialty clinics that we are putting on hold for now until we decide what we are going to do with them. Most of them are in progress and these are some of the larger hospitals and larger chains that we are working with and of course, lots of follow-up does happen. For ELR, the decision here is that most of this will go through the Beacon HIE and in the meantime, we've received no formal registrations for electronic lab reporting.

In California as I mentioned, all the counties are there local health departments jurisdictions and so in terms of state activities, they have a lot of information on their state website about Meaningful Use, and they are basically instructing the hospitals and providers to work with their local jurisdictions.

Then on the next slide you will see that we have set up a website for our Meaningful Use work and some easy to use URLs which we can pass along as we are in meetings and discussions with various groups.

Anyhow, you can contact us for more information. For my summary thoughts this is an evolution and we are in progress for Meaningful Use Stage 1.

We've had lower Meaningful Use testing activity or request for testing than we anticipated and I think that's because of several things:

- 1) A lot of the focus in on the immunization aspect
  - 2) The hospitals are going to be going through our San Diego Beacon HIE
  - 3) A lot of these healthcare providers are still trying to figure out what syndromic surveillance is and how to navigate that pathway, especially for the smaller clinics and providers.
- We've been kind of taking a flexible approach. We have the interpretation of some of the rules and criteria from ONC but we also know that there's some flexibility and in terms of the actual transmission and what the message content is so we've try to work very closely to work with that.
  - We've had some challenges doing the hardware and networking with our IT provider for the county. Some of the other smaller clinics and providers also have challenges in establishing the networks and we continue to work through that.
  - Finally, we are preparing for Meaningful Use Stage 2 and we know that's the next thing around the corner for us.

I think with that I will end and my contact information is [Jeffrey.johnson@sdcountry.ca.gov](mailto:Jeffrey.johnson@sdcountry.ca.gov). I know this is a very quick overview and hopefully you were all able to hear me on this presentation today and I see that there may be a few questions coming in.

### **The Local Implementation Perspective – Part 2 – Robert Wester**

Thank you very much, we apologize for the technical difficulties we had earlier today. Please bear with us as we try to resolve this issue. We are hoping for smooth sailing for the rest of the afternoon. This presentation has three speakers so we're going to delay Q&A for the other speakers until the end of this topic. Moving right along, we have with us Robert Wester.

*Rob Wester is a Community Health Program Specialist managing the San Diego County Immunization Registry (SDIR). He has been with the County of San Diego, Health and Human Service Agency since 2008. His career includes seven years of public health service and nine years in information technology and the financial services industries.*

Thank you, Jeff. I will try and not cover as much as Jeff did. We have parallel programs so you will see a little bit of redundancy. To give you a little background, context of the San Diego immunization Registry, we're robust immunization information system and we are managed by our vendor software partners. We've been HL7 compatible for seven or eight years. We have about 318 organizations that are part of SDIR submitting data and that's pretty good for a state that doesn't have mandatory immunization reporting. Our largest school district is San Diego Unified; they have about 50% of the county's students and they are using the registry as their own immunization system so we are getting read/write capacity from them. We are getting a lot of information entered into the system over the past couple of years and we have all the rest of the school districts on a read-only basis.

In terms of where we are at - about 60% of her records are still web-based use electronic exchange 40, we know that's going to change what it with Meaningful Use. We've got eight active interfaces that have been slowly coming on over the past maybe five or six years. We are looking at a big jump. We have interest of at least 130 different providers in our area that all want to interface with the registry so we're going to see a big impact in the next couple of years. We are 2.3 and 2.5 compatible. We have one provider sending us CCDs and another one has asked to test CCD through Meaningful Use so we have tried to open that up. Our capacity- we have about a little over 2 million patients in SDIR and our County population is about little over 3 million. We are doing well and in the next couple of years, thanks to Meaningful Use, we are going to grow. So the question is why San Diego in terms of immunizations doing Meaningful Use. CAIR (California Immunization Registry) is our statewide registry and it is composed of 10 regions but we do have different software. We've got four different types of software and we use match merge by software partners so that means we have to stand alone a little bit and then do some of the Meaningful Use testing on our own.

We're very fortunate that we had an ONC San Diego Beacon Project awarded in San Diego it was awarded to quite a few of the institutions and collaboration. UCSD, University of California San Diego is a lead recipient and we are very fortunate that the San Diego Beacon project wanted to have immunizations as one of their key elements to establish the HIE so that put us right in the front between having the Beacon support as well as Meaningful Use pushing providers to us, naturally give this a great opportunity. We are thankful that Beacon stepped in and was able to put funding together to allow us to be able to a little bit more creative in terms of how we're going to work with the HIE as well as trying to make sure we can open up immunizations for the rest of the County. We are assuming we probably have about 50% of the County right now so we've got quite a bit of room to grow. So what we've set up is we decided that it might be best for our system to be able to have almost a clone of the HIE so you can see there with the red ICD we call this the immunization destination. That has most of the software we have an SDIR, everything that's needed to be able to coordinate the immunization messaging back and forth and it is going to have real-time sync between our system and the County and the blue box and the dotted line is everything that will be controlled but will be part of the Beacon collaborative.

In terms of this background, when we are faced with Meaningful Use this Beacon HIE hasn't been built yet. We are still only a couple of weeks away until we have some good framework but when we started looking at Meaningful Use back in 2011 we didn't have Beacon ready yet so we wanted to make sure that when we set up a process that was as close to what we are going to envision as the final state within the HIE. Again, Beacon was able to support us in setting up a parallel testing system that would approximate our end state year, but give us an opportunity to be able to continue testing a lot sooner. The San Diego Beacon collaborative contracted with our vendor software partners to help them have the resources available to get us going with our testing. So what we did was we set up a Meaningful Use testing server that had the same software as the immunization destination which the HIE will eventually have. Both of those pieces are very close to what SDIR has minus a lot of the other software that helps us run our organizational operations outside of what we need just for immunizations. We are able to put this on the UCSD campus and we started testing back in September of 2011. The initial test had to be managed manually. By managing, what we had to do is make sure that we had a site ID that the provider sending a message would be able to incorporate and that site ID has to be registered within SDIR but we also had to register it within the Meaningful Use test server so this was a manual process for quite a while. Until software partners again on San Diego Beacon funding was able to build us a dashboard that I use internally and allows us to speed up the process to where I can register and get the credentials that are needed and pass those on to the provider that's about ready to send the message.

Just to backup, we decided organizationally that all of our Meaningful Use transmissions are going to go through the HIE so we're going to move everything up to the cloud so to speak and really try and maximize that immunization destination server and software and system to be able to group everything and then we will just be able to bring everything into a real-time sync. For anybody that is not yet part of the Beacon organization but is still using our web-based system some of our Legacy interfaces for just loading data to a flat file transfer.

In terms of our process, it is pretty similar to what Jeff just described for his. We worked in concert on this one not going to go over too much information here. I just wanted to give some of the detail is. Really trying to get the credential set up with the site ID, login, password and URL was a real hurdle and as soon as we had the dashboard setup that made everything a lot easier so back in 2011 for quite a few months software partners supported us and did much of our distracted much for work on the level of effort basis and then they are able to through the automation process that they developed now give a lot of automation or semi- automation back to us and we are spreading of the workload. We decided that we wanted to offer as many different transport possibilities as possible just to see what each one of the vendors and the providers would want to try out. Most everything's been HTTPS and we do have a couple of CCDs. We haven't had any offers for SFTP but that was open.

There's a lot of advantages for us to be up in the Beacon cloud: One is that there's an efficiency of us to be able to set up maybe and in SFTP protocol or port to port or be able

to establish a workflow up there that would be a lot faster than we are able to establish behind the County firewall. We have another vendor that has handled our IT and we have to go through quite a bit of hurdles in terms of paperwork to make sure everything is secure and safe but in terms of trying to push things as fast as we need to it does slow us down. Plus there's a cost advantage of being up in the HIE. If we try to open up a port or do SFTP, there are a lot of layers of activity we have to do through our own vendor up here so it is time-consuming as well as costly so it is really win-win for us and I hope Beacon can continue to be able to do this collaboration.

In terms of separating the workload, if we still have a CCD or somebody asks for SFTP port to port we will push that off to software partners because that's still trying to little bit more advanced than our automated systems can do but if anyone needs to do a SFTP or even an e-mail transfer we can do that pretty easily. In terms of the e-mail transfer, a lot of the smaller clinics that only have maybe 1000 patients visiting one doctor, one medical assistant, or maybe an office manager don't really have the technical capacity to be able to help us out and they've also not had a lot of support from their vendors; I think the vendors are very overloaded. But in terms of that we decided to allow based on what CMS said was okay to have the clinic to be able to send an attachment with the HL7 message and for us to put it through the Meaningful Use testing server and then it transfers to our system. That's considered an okay test and we are trying to only do that for those that we know it might be quite a while before we can actually do an interface lower in the queue, so to speak.

I want to take the time to really thank some support we received from Jess Conn and Travis Broome from CMS as well as Dan Martin from CDC. I sent a lot of e-mails, got lots of responses, we had formal as well as informal communications of that really helped us get set. If you are out there, I just want to say a big thank you because I cannot say enough about how much you guys helped out.

In terms of testing criteria background, we did our first test in 2011. We have 130 organizations that have contacted us and we have 100 organizations that passed the test. That's the number of organizations tested, not facilities. We found out after two or three months of testing that we had to test each facility within an organization to make sure EHR was rolled out to each one of their locations so we had to backtrack a little but luckily we were not too far down the road. With 97 tested passes, we have probably done 200 - 220 actual tests by facility. We've only had a couple of failed tests. We had 28 exemptions. Other than that, we're going forward pretty quickly.

In terms of some parting thoughts, from will left field we are getting some vendors that are still advising their clients that they don't have to test and this is carryover from California's previous non-ability to test but maybe there could have been some communication on our part to the clinics to let them know in advance. We're finding that a lot of the healthcare providers are contacting the immunization registry last in their process like they're following the checklist and it's hard for us to help them realize it takes a little longer than just a day to take care of all the testing we need to do.

Although we are working with certified systems, it seems like a lot of the vendors are still outputting immunization messages with all the segments they should I would assume with the certified system although I haven't looked at it enough. It looks like we're wrapping around in this next phase to tie down in terms of testing the systems.

The biggest hurdle that we have received from working with the healthcare organizations, it's a lot of the smaller clinics do not have the staff to be able to help us out and they don't know -- it's an MA or office manager and they don't have any technical background and they are not getting the feedback or any support from the vendors. That is a hurdle where I have to step in or one of the staff have to step in. It is time-consuming so we have to struggle to try and bring these groups along.

That's all for my slides, thank-you all.

### **The Local Implementation Perspective – Part 3 – Michael Coletta**

Thank you so much. We will hold off Q&A until the end of the presentations for this topic. At this time I would like to welcome Michael Coletta.

*Michael Coletta is the Lead Informatics Analyst for (NACCHO) the National Association of County and City Health Officials. He worked as a CDC Public Health Advisor and then as a coordinator of Research at Southwestern Medical Center in Dallas. Michael's interest lies in enhancing public health practice utilizing public health informatics and a practical knowledge of epidemiology.*

What I want to do, we just heard from some of our star performers at the local level, and I wanted to take a second to back up a step and give a broader view as well. Much of the work, the stuff you've been described - syndromic surveillance message acceptance, ELR message acceptance, and immunization registry participation - is often happening at the state level except for in certain large cities. Many local health departments are working to collaborate more closely with their state and ensure that they are receiving the data that they need from state build systems. In fact, a few states and localities have created collaborative HIT committees where locals and states are discussing the coordination of systems and implementation, making sure that things are interoperable and that each side is getting what they need. Those that haven't set up such collaboratives are beginning to report a real disconnect between the overarching state plan and the local systems and needs and implementation. I think that is really a good best practice to start putting if you haven't already put together those HIT committees.

At the local level, many local health departments pursued electronic health record technology and getting incentive payments to pay for that local installation of an EHR, some were successful but many have run into challenges and I wanted to outline those:

- Billing was one of the issues, which in stage two has been dealt with through some of their zero paid billing, which is where you may or may not be actually charging or receiving bills, but anything that was eligible for billing could suffice.

- One of the other barriers that local health departments reported back often was that they may have eligible providers in their health department or they may not. But many of the eligible providers in their health department may have also worked with other health systems and have promised their incentives elsewhere; that was quite troublesome.
- As well, in the early stages, what we were hearing is that a lot of the off the shelf EHR solutions lacked the understanding of public health.
- There is also some discussion around misunderstandings of why to have EHR at the local level. And some were pursuing it just because they felt like it was their only way to stay connected to the health information exchange and in practice they are beginning to find something different. Through the process, many have reported a need for practice management software instead of an EHR. In those cases, often they have come to the conclusion that may not be worth the expense and local business process analysis and things you need to go through to implement the EHR. That is very heavily dependent on the level of clinical services that are provided at the local level.

*One of the questions that I wanted to touch on is what are the major challenges that local health departments face in implementing Meaningful Use provisions?*

As you heard Jeff say early on, there is a steep learning curve. It took health departments a little bit of time to understand what Meaningful Use was, how it would impact them, and in many cases they are more up to speed but still learning, especially as stage two is defined and rolling out and stage three is being defined now. And then there is the typical time people and skilled workforce in informatics challenges and I just wanted to point out that at a local level, this is really no small feat. Truthfully, the task before local health department to accept one or more of these Meaningful Use measures, properly route the data, use it in meaningful ways, and turn around appropriate bidirectional messages by stage three really can overwhelm their current capabilities. And then of course if you add alongside business as usual and many of the financial difficulties that many are going through, it is truly challenging. But it isn't all because of poor resources. And this is one note you will see at the end of my presentation. Health departments have historically as you all know not been necessarily agile cohesive organizations but instead often very programmatic, siloed, and full of tradition. Not all bad but they are beginning to rethink their business model so they can survive moving forward and really think about new creative ways to find efficiencies, be nimble and work not only across programs but to reach out to the private sector partners as well. I think you heard much of that in the previous presentations.

*The next question I wanted to touch on was what are the unintended pluses of Meaningful Use?*

First, for many health departments, there's a greater awareness of syndromic surveillance, which any have seen as a good improvement. And then I think this is another very significant point - pushing public health to rally around standards and more uniform best practices, this is not an easy process but I feel like we have made a lot of good progress in a shorter period of time than we would have without Meaningful Use but challenges do remain:

- Defining standards is difficult work. It takes a lot of dedicated staff time. Many locals don't perceive having the time to give and often find the work very technical, but we do need that local voice and involvement to ensure that local needs are met.

*What key alignments between healthcare and public health are emerging because of Meaningful Use?*

I think some of this was in Arts earlier talk. There are a lot of potential key alignments that are out there. Accountable care organizations and health information exchanges are in need of two categories of services that I perceive local health departments could help around: care coordination/ case management/ home visits is one of those areas. And often, these Accountable Care Organizations (ACOs) and health information organizations are working to develop in-house resources. They could, however think about contracting local health department. One exception where this has happened is in the Minnesota Beacon. If you are not aware, they have contracted with local health departments to provide these services and better integrate them into the care coordination team. It's been quite successful. Another category of service where there is alignment is in community population assessment and analytics. Health insurance exchanges, health information exchanges, and Accountable Care Organizations have a lot of the data that local health departments need for these population assessments. However, often, the ACO's or HIE's might lack the perspective that the LHDs have. So traditionally, Accountable Care Organizations are interested in the population they serve but not necessarily the full population and in many cases they are scrambling to develop this analytic capability. Right now, these are real opportunities for public health to partner with health information exchanges and Accountable Care Organizations, and I think we should be cautionary because if we wait too long, other players could corner the market and public health could stand to lose more core service.

*What are the main benefits of Meaningful Use to local health departments?*

Meaningful Use gives a local health department a prominent place at the table as they say. And it's a real opportunity for us to enhance how the local health department is perceived and understood. But that comes with some responsibility to make sure that local health departments are asserting themselves, public health is making clear the value that it adds to the new healthcare paradigm, and there's a need to decide what is it that we want at the local and state levels for public health, and then at the national level provide good reasoning for it and work with our partners to receive it. We stand to get more complete and better data, but again, this comes with the responsibility that we ensure returning that data into meaningful information. Art touched on this earlier. This will help solidify a spot as a partner. The main benefit for public health is being an integral part of the healthcare team as it rolls out with some of the new population focus efforts that are underway.

**Q&A**

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At this time, we will request Mike and Rob to monitor the chat window and respond to the questions directly. The next presentation will begin at 2:30pm. We will continue Q&A until then. Thank you.

**Q:** How do you test messages semi automatically?

**A:** To test a message, the first thing we have to do is make sure the system recognizes the site ID and since we have an extra system in their which is the HIE clone, we have to make sure that we put the ID and the clone and have that send a message to SDIR, the system behind the County firewall to set up its own site ID so they are coordinated and the message can travel from one to the other. Semi automatically, we have a dashboard that opens up and I'm able to login all the information into the Meaningful Use test server. That will automatically send a response and log a site ID in SDIR County server. The only credential that I need to give the provider is the one that is on the Meaningful Use test server. That's what I meant by semi automation in terms of using that dashboard tool that was developed for us.

**Q:** Did you onboard the hospitals for syndromic surveillance or was it done by the HIE? Would you like to share your experiences for that process?

**A:** Before I moved over to the immunization Registry I was working with Jeff on syndromic surveillance, and we had a very robust system set up that he had started six or seven years ago. The syndromic surveillance system he was starting with had at least eight or nine hospitals that were already feeding data in. The data would come in through a dropbox and then we would load it into the system and then run it that way. I'm not sure exactly where he will be going with automation working with Beacon on this, but everything was done prior so he's got to do a migration up to Beacon if that is the direction we will be going within the syndromic surveillance.

**Q:** How many extra staff are you bringing with the increase from connections to 100% in stage two? That could be thousands, correct?

**A:** In terms of extra staff, it I don't think it is thousands. There might be dollars. We are not sure how much we will be able to get. A connections to at least 128. There are 120 that have shown interest and we have tested close to 100. We know that we are going to be going from eight to 120. We're trying to automate part of that process with the HIE's. The San Diego Beacon collaborative is funding software partners to possibly do a little bit of automation in establishing all the systems we need between the vendor and our system. They might put something up like they did with the dashboard for us. I think their turn to work on something that would help streamline that. That is all just a discussion right now. In terms of resources, we're fortunate that the Beacon does have the funding to be able to on board a lot of these providers and work with the vendors. They do have a staffing issue, they will staff up a little but that's all outside of my scope. However, those are meetings that are coming up.

**Q:** Can HIE allow each hospital to input data directly into your database?

**A:** It's an interface, so if they're putting information directly into their EHR it gets transferred to us. We do have the web system, our legacy system, that people would be able to type in and we have a little bit more quality assurance control because we are controlling the format that the data goes in and that goes directly into our database. I hope that answered the question.

**Q:** Are you going to maintain both the legacy as well as accept EHR formatted data?

**A:** The answer is Yes. We have quite a few providers that aren't part of Medicare or Medicaid billing that are still looking at using the Immunization Registry, and they use the legacy web-enabled format. We're definitely going to keep that going. It will phase out as it becomes more and more cost effective. As for dual data entry, that is something that doesn't have the same push as Medicare and Medicaid funded providers do. I have no idea in terms of how long it will take to phase that out or where it will go with that. But we do have a lot of information that comes from the schools.

**Q:** There are more than 120 providers in San Diego so do you focus just on the provider networks? Who gives out exceptions and how do you determine?

**A:** We have at least 120 that have contacted us. There could be 140 or 160 by the time we're all set and done next year. I know that a couple of doctors have contacted us saying they know the guy down the hall is getting funding so they want to onboard. I've had 10 requests in trying to do Meaningful Use testing in this last week just from providers trying to meet a deadline. Who gives out the exceptions and how do we determine it? That is on a case-by-case basis- right now we make sure our deputy public health officer and Chief of branch look at it and a couple of issues have come up: 1) The timeline is too tight for us to be able to respond so that's a pretty easy one because if we can't respond we give an exception. 2) Another one is that the vendor is not giving them any sort of support even though they know the system -- they don't have any help in doing that. That is a thing that would give a lot of weight. That's how we're looking at the exceptions. In terms of, we have 120 providers and we look at the large networks, that's where the most public health value is. That will be a triage that we will have to look at. I'm not sure where that will go. We're still waiting to look at our full status with Beacon and where our funding is and how the San Diego Beacon HIE evolves into the next stage to be handed over for community collaborative to exist outside of just beacon funding.

**Q:** The current focus is on IIS in collaboration with Beacon. Are there plans to use Beacon as the platform for Syndromic Surveillance and ELR MU?

**A:** The answer I believe is yes. Looks like we're trying to move as much as we can up to the HIE. I know plans are in the works for the same type of Meaningful Use test server for syndromic. I know that syndromic surveillance is being tested on the HIE so I would assume we will be putting everything else in that as well.

**Q:** What areas do you see where a hospital would need to report directly to CDC rather than through you as the county public health department?

**A:** That question would probably have to be directed to our deputy public health officer. That is out of my scope.

### **EHR MU Past, Present, & Future – Travis Broome**

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Welcome back, everyone. We're ready to get started with a third session of the evening. We've had a few hiccups earlier today but hopefully things will go much smoother going forward and thank you for staying with us. Next up we have Travis Broome talking to us

about the past, present, and future of EHR Meaningful Use. I would like to introduce Travis at this point.

*Travis develops and writes the policies of the Medicare and Medicaid EHR incentive programs in the Office of E-Health Standards and Services. His primary responsibility is the development of the meaningful use criteria. Once developed, Travis conducts outreach and education on meaningful use and other aspects of the EHR incentive programs as well as assisting in the creation and refinement of the CMS systems supporting the incentive programs.*

Welcome everyone to the presentation today. We are going to go through the slides, the past, present, and future of the program. A little more ranging, we will not focus on the newest and greatest but rather the totality that is the Medicare and Medicaid EHR incentive programs. One of the first things you have to know about the programs is that it is limited to certain types of eligible professionals and physicians so this is our directly incentivized group of folks. That does not mean that Meaningful Use and concepts and impacts are limited just to these groups. These are just the people who directly receive the incentive money. Obviously, that incentive money then turns around and gets passed on to developers who develop products, it pays for consultants to help them redesign workflow processes and it pays for staff members to help them utilize it. However, the directly eligible folks are there on your screen.

On the Medicare side, you have to be a Dr. of something. Medicaid you have everyone you have on the Medicare side except optometrist, podiatrists and chiropractors. Medicaid you gain nurse practitioners, certified nurse midwives and physician assistants. On our hospital side, you are looking again on the Medicare slightly smaller group; Medicare you are looking at your Acute Care Hospitals, IPPS Hospitals also known as subsection D. All your hospitals you would consider traditional hospitals that are paid under the inpatient perspective payment system under Medicare and you have your Critical Access Hospitals. On the Medicaid side, we add a few more hospitals: Children's Hospitals, Acute Care Hospitals that are in the territories, and Cancer Hospitals. Most of the Medicare hospitals will also be eligible for Medicaid and they can participate in both programs. Unlike our eligible professionals that we talked about previously, they are less likely to be eligible for both programs. If they are eligible for both programs, they must pick between the two.

We will spend most of our time today not talking about the money so much, but the concept of Meaningful Use. That is really what all of this program is centered around. It wasn't designed by Congress and certainly wasn't implemented by HHS to be a program to encourage simply the adoption of Electronic Health Records. It was to encourage -- this is a phrase we got straight from the law -- the Meaningful Use of Electronic Health Records that are certified. We broke Meaningful Use into four goals and a MUST:

1. Using certified EHR technology to improve quality, safety, efficiency and reduce health disparities.
2. Engage patients and families in their health care
3. Improve care coordination
4. Improve population and public health.

The MUST is you have to maintain privacy and security. If we don't maintain privacy and security, people won't let us use health information technology or EHRs in the ways we need to use it to do the previous four goals.

Broadly speaking, one of the key things that Meaningful Use seeks to do is to collect lots of data. If you think about a simple typical office visit, how much data you collect or comes across in just a typical office visit: you've got when the patient shows up, demographic information, insurance information, past medical history, past medications, you have family medical history, all these things that the patient comes with that you may or may not collect. And you've got all the data elements that are driven that are collected in the actual encounter: the diagnosis, observations made by physicians and other clinicians, tests that are run with immediate results, any of those things are all data points collected during the visit. More information collected from the patient through questioning and things like that. And then you have data that comes after visits: lab test results, patient follow-up for their medications, do they feel better in 48 hours later and all the various data. Tons and tons of data coming in and that is your typical, normal, level three office visit. Health information technology is seen as a way to coalesce and actually collect all of that data. It is really not very difficult or impossible to collect all of that data on paper. What is really hard, and where the hope of information technology really lies in the EHR is turning that data into information automatically. That's where it gets really hard on paper. When the information is on paper, a person has to turn that data into information. An insurance specialist has to look at it and figure out what to do with it; clinicians have to look at the observations and decide what to do about it. Information technology can help in turning all of that data it collects into information and that is where the assistance comes in.

I covered my next few slides when I was doing the other one. The only feasible way to capture all of that data, and it is certainly the only feasible way to capture that data in the course of doing those things. One of the promises, I call it a promise, of information technology generally is that collecting some of that data will just be a result of the actual actions. To use the example from another industry, if you think about retail, when you checkout and they scan all those items, that scan is doing two things all at the same time: 1) it is figuring out how much you owe for the item and 2) Also doing inventory control for the retailer. All through one action in the course of doing business, that data is being collected. It is not added back in later. The hope is that health information technology will start to add some of those processes in the capturing of the data and then turning that data into information. Once you have all of that data, can it be turned into information? Drug/drug interactions, simple things, knowing the code for this drug does not play well for another drug; simple stuff that information technology can do. It can do more complex things both at an individual patient level and a broader population health level. I think we are just now beginning to scratch the surface of the things we can do with the data at both levels. And we want clinicians to -- you hear the phrase -- practice at the top of their license. A lot of times EHRs are not synonymous with that because people talk about, they make physicians and others do a lot of data entry. That is not a characteristic of Meaningful Use. That is a design imposition from the EHRs themselves. It is to tell people that there is literally nothing in Meaningful Use that requires an actual physician to touch the EHR. Everything in Meaningful Use can be done by an extender of some type, be it a nurse or office staff for problem list or the patient themselves for vital signs or

demographic information. Again, not only can we move towards the top of the license using EHRs to collect data in the course of doing things, like if a physician has to order the medication somehow, it might be easier for one physician to tell someone to put it into the system but for a younger physician or one that is more tech savvy, it might be easier for them to use the system and collect the data in the process of ordering the medication as opposed to ordering the medication and also collecting the information that the medication was ordered. Having the patient do things online, patient intake forms, things like that. But then also taking the data and turning it into information where can so the clinicians can focus on analyzing the data and worrying about the data that they collect be it their own observations of the patient or any data points and turning that into information for the things that can't be done. What drug to give the patient as opposed to worrying about does this drug interact with that drug? That type of thing.

Turning data into information. When you're going to do that with HIT, clinician involvement is key in deciding whether that's a clinical function or an HIT function for a given data element. Clinician involvement is a must in deciding whether it's a clinical function or HIT function for given data elements. The clinicians especially, they need to make this decision for two reasons: 1) In many cases they are the ones who are qualified to make it even if other people may be qualified to make it they also need to buy into it. The decision that we are going to let the HIT function on drug interactions and the clinician function focus on deciding which drug, that's a decision that needs clinician involvement in making both for buy-in and for analysis of which way to go. Various factors when making that decision - Is it a clinical decision or is it a step in a process that is a result of the clinical decision? What drug is prescribed? The function of actually prescribing the drug, that is the process that is the results of the clinical decision and so HIT can go big-time, attack that process like crazy. Does X always lead to Y? Obviously, if doing something always mean to do something else, that's a great opportunity to automate that as much as possible to eliminate error. And then the other decision again, very important, clinician involvement, clinical buy-in, is the HIT when it turns data into information, is it suggesting the information or is it insisting upon it? To go back to the drug interactions, is it warning you or is it preventing you from ordering both drugs? Again it's very much a decision point that you need clinician involvement, nurses, for both buy-in and for expertise.

How this plays out in Meaningful Use and it plays out - this is an example, to give you an idea of the volume of information and data that we are trying to through Meaningful Use, spur health information technology to help with:

- Number of patients who have an operation on the wrong side: 5
- Number of hospitalized patients who have something wrong, this is everyday: 40,000.
- Number of people who have a complication from a medication, hospitalized patients: 10,000.

Probability of performing perfectly: This is why it is so important when you think about Meaningful Use to really look at your processes and not just replace paper with computers. The point of showing the slide is twofold: 1) the process so you can see the probability of success and 95% if there's only one element, you get it right 95% of the time. 2) If there are 100 steps in the process and each step is 95% reliable, you are only

getting it right .6% of the time. There are two ways that this relates to health information technology and there is one way this relates to redesign. First off, you need information technology. In our case, health information technology to even know. I would maintain that there is no way that somebody knows whether they are 99.99% reliable or 99.9% reliable if that data isn't in an information technology system. It's not possible using paper records to even know how successful you are on any given element. The other area where health IT shows promise is in improving the probability of success through alerts, stops, warnings, tools like barcoding, RFID, things like that. We can improve the probability of success at each step and potentially make the number of elements shorter although that is every bit as dependent on process redesign and workflow redesign as it is on the technology itself. The top row is all about information technology in both knowing the rows, knowing the performance, and working on improving the performance where as the left column is every bit as dependent on redesigning your processes as it is on information technology.

This is a typical hospital. How many medication doses in a year? 500 bed hospital, 24,000 patients, 240,000 medications a year. That means 2,880,000 doses. If everyone in that process is 99.9% accurate, you are still getting 240 medications a year from Dr. error, 2,880 from pharmacist error, and 2,884 from nurses error for a total of 6000 errors a year and that is when everyone is 99.9% accurate. Living with 99.9% reliability, aircraft would be 84 unsafe landings a day, 16,000 pieces of lost mail in an hour and 32,000 bank check error/ per hr. Obviously, 99.9% does not cut it. Relating all that back, that is the case for Meaningful Use and the impetus for Meaningful Use. How does that relate back into the actual objectives and goals of Meaningful Use and the structure of Meaningful Use?

That gets into Meaningful Use and implementation. We want to put every objective in the context of the goals that we discussed at the beginning, and how they are affected overtime and the reasoning and need case that we presented before. To use computer computerized order entry, that is aligned with the improve quality and efficiency goal. When you implement your EHR, there will be hundreds if not thousands of questions you will have for meeting Meaningful Use. And how do I actually implement my system so that it is compliant? We can't possibly answer all those questions for you. We don't want to answer all those questions for you. Many of them will be very unique to your circumstance. What we say is put the context, those questions into the context of the goal and what we just went through. CPOE, when I need to make this decision, does that include quality safety and efficiency? Does it add in an alert function that turns data into information that improves my reliability? Does it simply help me measure my reliabilities so I know? What does making decision Y or decision X, which one moves me more towards the goal?

The next question, is it immeasurable? We have talked about a lot of things, went through some data that is all completely dependent on you being able to measure those things. We understand it is a lot of work to enter all this information and to have all this information in a system. If you will go through the trouble of getting it in there, please make sure it is measurable. And the last part which is the part that we are dependent upon the providers and clinicians and those the consultants and vendors to focus on is usability and workflow. And ensuring that not only do we bump up the reliability level, not

only can we measure reliability, but can we also attack the process? Can we get rid of error possibilities and types? Can we make life easier for clinicians and remove things off their plates so they can focus at the top of their license?

Meaningful Use risks are the exact opposite of what we just talked about – can't measure, can't share, & aiming too low. Perfect example of this comes from public health. For public health, the stage 1 measure was to test your EHRs to submit immunization registry information. A lot of folks did a test using a method that they had no intent to operationalize their immunizations. That probably had some value and certainly had some value in the sense that it validated the format of their immunization HL7 message or something like that. But that's not do anything for the present now, or the near future in stage two. If you tested a way that you aren't going to do ongoing submission, you are starting over for stage two. That is aiming too low. You probably got a little bit of good information but as Meaningful Use progresses you always want to be looking ahead. Testing, if at all possible, the way you will do ongoing submission in the near future of immunization information in stage two.

Speaking of stage two, this is both our present and our near future in the sense of what we are going to be doing shortly in 2014 when the providers will start doing it.

This is our structure of Meaningful Use, the past, present, and future. Being in the middle makes it a nice title to go with this slide. Stage one was all about that data capture- getting the information, the data in there so it can be turned into information so it can be measured. Stage two is all about clinical processes. Turning data into information and improved outcomes. Does that information actually result in improved outcomes? That is the far future as opposed to the 2014 future. In a nutshell, slide 19, pretty much the whole presentation but we have a few more slides.

Meaningful Use path, I said I wasn't going to focus on the money very much, and we will focus on the colored blocks. It is a personal path. Stage one, stage two, stage three, when the providers start, they start that progression. That's why you see everyone going through him -- starting in stage one. This slide is promising the same situation. Some of the changes from the current time and the past to the near future in stage two is that the overall number of objectives are the same but they shift towards the core. A lot of things that were in the menu are now core. We did some consolidation and the menu objectives are new. One thing that gets lost a lot in this presentation, gets lost in most presentations, is that it is Meaningful Use of "certified" EHR technology. The law really focused on two areas: 1) that providers would use technology in such a way that it would improve outcomes and make a difference in health, and 2) that providers had technology that was able to do that. That is where certification comes in. Certification is different than Meaningful Use. It is like we phase you in to its use, but there is no reason to phase in number impact to another industry. If you are buying a technology today- maybe you will be learning how to use office, Microsoft office. You're a novice user and we will not expect you to do pivot tables in Excel on the first day. With that thing said, you will not go back and by office 2003. You will by office 2010. Now, and it will take you a while -- it might take you as long as the person who started on 2003 to learn how to do pivot tables a moment tough but you will not go backwards in technology. You will just are your use path with the latest technology. And that is really where we are at with certified EHR technology as well

starting in 2014 regardless of what stage you will be adopting certified EHR technology for the 2014 criteria. We are phasing that rollout. Rather than everyone having to switch over from version 1.0 to version 2.0 on one date, we basically have four rollover dates aligned with each quarter in the year in 2014.

I'm certainly not going to read every objective of stage two to you. What I will do is highlight some of the process ones and contrast with some data collection ones. First page, you see lots of data collection, these are mainly left over from stage one.

- CPOE, it's a process but it's process for data. To input data so you see CPOE for medications, and serves as a trigger for interventions that we will talk about in a second.
- E-Rx, definitely a process. This is how the clinical decision patient needs a medication X gets translated into patient has medication X. Part of that process is transmitting the information from the person who made the decision to the person who will fill the medication. Obviously health information technology can help in that process.
- Demographics, vital signs, smoking status, these are all getting the information in, doesn't matter who gets it in as long as it gets in structured data and data that has potential to turn into information.
- Interventions, now we're talking process here. Clinical decision support interventions. The system has turned data into information and is providing the information back to folks who can do something about it, clinicians usually but not always.
- Labs-Then we see some more data collection incorporation with data results.
- Patient List - Now we are aggregating data into patient list and potentially turning that into information.
- Preventative reminders - using the data in there to turn it into information i.e. patient actually needs a reminder and then using the information to actually provide the service.
- Patient access, this is the provider providing data to the patient and then 5% actually accessing it and then the patients actually get it going and getting that data. Your first outcome, if you will. You have the data- the provider collected the data, they went through a process to put it online, did the patient actually ask it, kind of your first outcome if you will.
- Education resources, these are all core objectives. And I promised I wouldn't go through all of them so I will just keep moving here.
- Since this is a CDC call, number 16, public health core objective. Success ongoing transmission of immunization data. Many of the things I've talked about how public health uses that speaks directly to public health.
- And here is the menu. This is the select 3 out of 6 things.
  - Imaging results, getting data into the systems
  - Family health history, new types of data in,
  - You see three processes related to public health: 1) Syndromic surveillance, 2) Cancer, 3) Specialized Registry
  - Progress Notes -actually getting data in.

- As you can see the menu is essentially split halfway between data collection and processes.

Hospitals must meet all 16 core. The biggest difference in this slide

That's a process that again uses Health Information Technology to make the process better to medication administration reconciliation is definitely essentially a process that really you can do without Health Information Technology - the idea of this objective is to add some Health Information Technology objectives or capabilities and have those assist eMAR. And bar coding by far the most popular certainly not the only one - RFID, drug location tracking systems like double checks and things in information technology as well.

This slide pretty much is exactly the same for hospitals. You notice they have more core public health objectives for hospitals immunizations, reportable lab - a lot of questions of which labs are reportable, that depends on who your duty to report is to- so that would be the public health agencies for which have jurisdiction of your facility. Those would be the reportable labs.

Hospitals get a menu too, the same size three out of six most of the same things. Less focus on or a shift away from processes. You have two process measures here: E-Rx and labs so providing the structure electronic lab results for EPs although that helps the process for the hospital that really helps the data of the EP because the EP gets the results electronically and then family health history, imaging, prognoses and advance directives.

We're going to take a closer look here at two objectives of Meaningful Use in Stage 2. These are widely considered the biggest leaps, if you will, from Stage one. First is patient engagement - so not only is a provider going to have to collect all this information and develop a process to make it available online either through their own portal or through a third-party Health Vault into its products, any of those things. But we want them to put processes and effort into ensuring that patients again kind of our first step towards outcomes, if you will, actually acquire that information, access that information. More than 5% of patients sending secured messages to EPs are accessing their health information online. There are lots of various reasons why it might be easier for hospital X to meet this measure than hospital Y rather than trying to parse out all those reasons to do exclusions and things like that. We just went with the low threshold of 5% across-the-board to basically allow the 95% of people who don't have to do this to account for all of those variations that would really be impossible to account for individually.

The other big push is Electronic Exchange. This one talks about summary of care at transitions of care and referrals but the other big push I don't have a slide for is electronic exchange in public health reporting. So just as we are moving from a test of exchanging key clinical information in Stage 1 to 10% of transitions of care and referrals are sent electronically we're moving from a test in public health to ongoing submission of information in the public health arena. There is no 10% for public health in the

immunization and things like that. We define successful ongoing transmission as either the obvious given immunization that gets sent in is my routine process if that doesn't happen every single time you still meet the measure but that's kind of the routine . Or I'm actively engaged in on boarding towards that goal. So I'm not testing something that isn't going to be put into production, I'm engaged with the production side of ongoing submission and then obviously on the public health side we still have all the same exclusions – PHA isn't quite ready to accept those type of transmissions.

Going back to what it means for summary of care records, I will give you an example when I break this one down: I have a 2-year-old, several months ago he had enough infections that he earned himself a referral to an ear/nose/ throat doctor. The pediatrician printed out a summary of record, handed it to me and said give this to your ENT. That meets the 50%. The providers sent to me a summary of care record for more than 50% of transitions of care referrals.

The next one is what it wouldn't have met which is the 10% so this is electronically transmits a summary of care record using Meaningful Use of certified EHR technology, using the standards of certified EHR technology which is direct. Consolidated clinical document architecture is the structure for the summary of care record. If he had sent that using direct to the ENT and I happen to know he knows that would count as a 10%. Then the third measure if he'd send that document and he knows that the ENT uses a vendor Y and he knows he uses vendor X taken that one transmission would have met the third measure. If it gets more difficult for providers to meet the third measure rather than what I just said, I know I summary of care records electronically to Dr. Smith, I know Dr. Smith, a different vendor, easy, it is more difficult than that, we will set up a test EHR at CMS still up in the air whether CMS, NIST, or someone else will host it in which case you can just test, obviously not with real information, with us and meet measure three.

The other are of Meaningful Use that we didn't really talk too much about is clinical quality measures but it is very important piece of Meaningful Use, it is called out in the law – it is part of Stage 1 & Stage 2. The big thing for clinical quality measures and Meaningful Use and Health Information Technology in general is Health Information Technology is again turning data into information. The promise of Health Information Technology when it comes to clinical quality measures is that it will scan, trool, look at whatever verb you want to use - the data that EP's in hospitals collect just as a matter of course of providing care and it will determine how they are doing on specific measures so basically it'll provide information performance on measures back to various people, the clinicians themselves, Medicare, Medicaid, other payers, patients, quality organizations, whoever. That's the promise and in the future for those of you actively involved with EHR implementations, you know that is still a goal to be worked for, that is not really today for anyone. We are taking big steps especially on the certification side in that regard to make sure that the data in EHRs is being collected and being collected in a way that can be used by the clinical quality measure engines and turned into information.

The other area that we are working on through Meaningful Use and CMS is working on in general is we want to kind of start to align both the measures we are collecting and how

we collect them. So it is obviously a lot easier if you want to know about the care of diabetes patients to have one measure reported one way so however many people need it than it is to have five measures reported five different ways.

This slide up here is starting to show some of our alignment. One of the big decision points in alignment is whether you get aggregate information or patient level information you can see there are different options here so I will readily admit stage 2 of Meaningful Use did not solve that question for CMS or for anyone else. We do have both of those options and you can walk through on your own the slides for those various options. We are starting to what we call give dual credit for CQM submission and multiple CMS programs.

Same thing on a hospital, you see the aggregate level and patient level differences and acquitted differences as well.

So now to talk about the far future in improving outcomes. The Health Information Technology Policy Committee is our federal advisory board. They have published what they think Stage 3 of Meaningful Use should look like. That's available for public comment on regulations.gov and if you were to type in Meaningful Use on regulations.gov it would come up. You have until January 14<sup>th</sup> to comment on that but broadly speaking, I'm not speaking for them but speaking for CMS, we always have been looking towards the improvement of outcomes - so are our processes working? A possible example is are patients actually accessing their information? We're starting to link clinical decision support interventions to clinical quality measures, that's the process. Are those interventions actually better performance, better outcomes on those measures? Those are two obvious examples, obviously there is much much more possibility out there, we cannot possibly think of it all on our own, there are only so many of us and probably not as many as you might think so please, please, please public comment into the Policy Committee and when we do formulate the proposed rule based on those comments and recognition to the Policy Committee come on that as well.

This slide says Stages 2 resources but really go to [CMS.gov/EHRIncentivePrograms](https://www.cms.gov/EHRIncentivePrograms) and you can get resources to both the past Stage 1 stuff, the current Stage 1 stuff and the near future of Stage 2, it is all there for you. That is Q&A so I will back up a slide here so you can have the links and things up there for you. I guess I will start taking a look at the questions.

## **Q&A**

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**Q:** One of the first questions here...

**A:** The ONC maintains a website, it is called the CHPL, you can Google and it will give you the list of all of the certified products, there are many and the other thing to remember about certification is that not all products do all things – the do have what we call “Modular Certifications” so I mentioned health vault earlier and into its products for PHR so obviously that's all they do. So they would focus on being certified online access for patients but they are not going to have a CPOE function. There's hundreds and hundreds of products but some of them are specialized and some of them are all-encompassing.

**Q:** Regarding the provider objectives in order to meet the requirements of MU to receive compensation, do providers have latitude to choose which objectives they meet the overall goals for compensation? For example, under MU 2, facilities submit cancer data to a public health authority, cancer registry. Can a facility choose not to submit cancer data and still meet the overall goals of MU 2 and still receive compensation?

**A:** Yes because cancer is in the menu objectives. I went through the objectives, three out of six, you have to do all of the core but a lot of them include exclusions so we will stick with the cancer example. There's an exclusion for providers who neither diagnose nor treat cancer so if that cancer objective was in the core you could still Meaningful Use if you don't diagnose or treat cancer because you would meet the exclusion not because you're sending information about whatever you do to diagnose and treat to a cancer registry.

**Q:** Patient visit summary provides a snapshot of that day's visit with the summary of care document how detailed is that, what information do we need to provide? Thanks.

**A:** Right, so the office visit summary as was outlined kind of what happened on that day plus on the back, if you will, on the information the provider has makes the information the provider has on the patient so maybe it didn't change the diagnoses on the day but they still didn't get the problem list on the summary. The summary of care record, the transitions of care and referrals- there's two things that make that distinct from the patient visit summary. One is its structure. That summary of care record needs to be a consolidated clinical document architecture and needs to conform to that standard and that is so when you send electronically to another provider their system can consume that document, that record, without having to manually review and look at it and input it. As far as the actual data elements that are on it, there are a few more on the summary of care record than the patient visit summary but the overall data record size isn't terribly different. It really focuses on the structure, you'll probably get a little more history in the summary of care records. There's some things that for referrals there is a reason for referral field -- obviously that wouldn't be on the patient visit summary so there's a lot of elements crossover but there is some differences as well.

As far as what information you need to provide - basically your systems going to be set up or certified systems are certified to pull all of the required elements and basically the Meaningful Use requires you to provide what's pulled and to check problem list, med list, med allergy list to ensure they are up to date today because those are obviously very important when you are doing referral or transitions of care. There is also - if you believe harm might arise from disclosing information – so let's say the EHR pulls mental health status but you're referring them over for a colonoscopy or something and you want to withhold that because you think harm might arise from spreading that around you can do that as well.

**Q:** Having an EP submit infectious disease reports to a registry satisfy MU 2 to submission to a specialized registry?

**A:** Yes, we are very open for the specialized registry one. Describe that one as giving credit where credit is due and not intending to impose a lot of new requirements on folks.

Specialized registry is basically if you're electronically submitting information to a registry that isn't a cancer registry, isn't immunization, isn't reportable lab results and isn't syndromic surveillance so it is not already covered so any registry that's not already covered by another objective could fall under the umbrella of a specialized registry.

That takes me to the bottom of my questions so I think we still have about 13 minutes or so feel free to keep pushing them in. Since you mentioned office visits patient summary I will say a quick note about that one, that's a little bit of a soap box for me. I mentioned we do have the data elements and the EHRs automatically pull those elements into the summary. How those are presented to the patient though is 100% dependent upon the developers and you the clinicians and providers. CMS and ONC, we may know – we don't even have guidance, its much less requirements on how that thing is designed. So design it as most relevant as you see fit while I've seen all sorts of various iterations of them some good, some terrible, I've seen ones that basically just fill it in and it looks like it was printed on dot matrix printer and the information is pulled in in the order that it was in the rule as someone who literally typed in the stage one rule for that order. I can tell you I put no thought into the order and received no input on the order so obviously we do not care what order the information appears on the office visit summary as the design decision. I have seen other ones that are frankly amazing where upfront very clear, what we actually did in the visit, what your next steps are, education resulting from what happened in the visit followed by updates, this is what we know about you, this is what we know about your medication list, things we didn't know before. I have seen some people who split the office visit summary and this is okay. They provide a paper one that's got what we did on this visit and they make the other stuff available online so they put that day's information and historical information online then they only provide on paper what happened during that visit. This is perfectly acceptable. No dictations about the design here.

**Q:** A question about my contact information.

**A:** I'm more than happy to do that. I will send it out in a chat to everyone. Travis Broome [travis.broome@cms.hhs.gov](mailto:travis.broome@cms.hhs.gov)

**Q:** Can a facility choose to exclude certain lab test results from patients access within 4 days and still meet the MU requirements? For example, molecular genetic tests results needing further explanation (i.e. a negative breast cancer result doesn't necessarily mean a woman is not at an increased risk). Can we selectively choose certain lab results to not make readily accessible to patients?

**A:** Absolutely. There is a provision in the regulations themselves so no FAQ needed. It is in the regulations we thought of it ahead of time. We like to do that, we always do that. Basically if the provider be at the hospital or physician or whoever feels that disclosure of a lab result in that manner is not the best way to disclose it they can withhold that pending notification of the result to the patient by some other means, phone call, coming back in for a visit. Negative breast cancer result does not mean a woman is not at increased risk, I would imagine you probably would want to withhold the opposite- you don't want someone to find out that they have breast cancer because they happen to log in that morning before you got around to calling them. I'm assuming that would not be a good for most folks so

absolutely you can selectively choose certain lab results that you want to make notification to the patient prior to posting them online.

**Q:** You most likely are aware of extensive data breaches where confidential information is released to the general public, this is obviously less likely with paper medical records, what are some of the suggestions to prevent this and is there a website one can go to see what to do if this inadvertently happens and prevent being fined for violation of HIPAA?

**A:** So yes, this is huge. This is four goals and a must so this is the must. You've seen one of the things that information technology does is that it makes data portable and that's where you run into a lot of the breaches losing laptops, losing USB drives. ONC on their website which is Health IT.gov for privacy and security, they recently published a guide which is only about 15 pages or so on privacy and security. The Office of Civil Rights which is OCR.gov office of Civil Rights, they are the ones who actually administer HIPAA and they have more government speak regulations or guidance, if you will. That is available on their website as well. The biggest tip is encrypt and encrypt, encrypt. If you lose something that's encrypted that is a completely different story than losing something that is not encrypted. Without getting into too many specifics both because I'm not that qualified for and it is not really that appropriate, encrypting the information and limiting access, what do people really need cannot lose what you don't have so that's a big thing where I work. I work for the centers for Medicare and Medicaid services. But I work on Health Information Technology Policy, I work on Meaningful Use so unlike my colleague down the road I cannot go into the system and pull the Medicare beneficiaries records. I just don't have that authority. So that's one of the big ways -- I know I was a big fan personally when we switched to the PIV cards because the biggest benefit to CMS was that it is more secure, and the biggest benefit to me is that I don't have to change my password every two months. All I had to remember was my card and make numbers that go with it.

**Q:** How do providers find out if the health department in their jurisdiction is accepting data (e.g. immunization registries) or not?

**A:** Today the answer is go to their website and call them. However, CMS, CDC and ONC we're working on establishing a centralized information database where you'll be able to put in your address and it will give you the public health agencies jurisdiction and it will give you their status on each of the Meaningful Use objective measures and it would tell you where to go to get more information. That is currently past the design stage but more and to moving the contract stage but we will have that up in time for when it is proposed to be used in the regulation for 2014 attestations. But for right now, contact your Public Health Agency. Good people to know if you don't know who they are already.

**Q:** If state is providing attestation agency, for example California immunization registry, could the EPs or EHs have any exemptions when it is not actually an LHD providing the attestation?

**A:** I think we have one too many acronyms for me there. Not 100% sure what an LHD is so Jessica, if you could send me what that is I will try and answer your question. Local health department. Okay. So the EPs and EHs, they want to look at their jurisdictions, you mention, California which is why I'm sure this came up because California they have a lot

of county level public health departments that do this as opposed to state-level. You do need to look at your public health agencies that have your jurisdiction so if you're in California just because your state doesn't take it you still need to look at your county. I happen to live in Dallas-Fort Worth County which is in the Dallas-Fort Worth area and its unique, it's one of the few counties that actually accepts syndromic surveillance data electronically from eligible professionals so eligible professionals in the county they would need to also look to the county in addition to the state of Texas.

Thank you for the correction on the Office of Civil Rights. The website, they really should make it simpler but that's the correction there.

**Q:** Do we need to provide our patient visit summary in the patient's native language?

**A:** No. That's not currently a requirement of Meaningful Use. Obviously it would be considered a best practice if at all possible, but not all technologies are supporting all languages and they are not required to buy certification and therefore we cannot require it for Meaningful Use. Hopefully that will continue to expand, that capability will continue to expand but for right now it is not the case. With that I will -- that's both our time and our last question so thank you.

### **EHR MU & PH Data Exchange: Implications & Challenges – Jim Daniel**

Thank you, Travis for that smooth informative presentation. We appreciate you taking up the tent from your busy schedule to join us this afternoon. I distill some of the questions that will left unanswered so due to time we do have to pause right now with Travis' presentation, however you can reach Travis at his website. It is 3:30 and we are right on time to begin our fourth speaker who is Jim Daniel. He will be speaking to us about the implications and challenges of EHR Meaningful Use and public health data exchange.

*Jim Daniel is the Public Health Coordinator at the Office of the National Coordinator for Health Information Technology at HHS, and he is an adjunct Assistant Professor at Massachusetts College of Pharmacy and Health Services. Jim worked as a Chief Information Officer and Director of Informatics at Massachusetts Department of Public Health. He has also held the position of an Epidemiologist at Harvard Vanguard and a Research associate at Genentech.*

Okay, so I think some of the material that I have in my slides has probably been covered in some of the earlier sessions so I will try to go through that fairly quickly, but having said that, feel free to message questions along the way if there is something more specific that you'd like for me to go into. I'm happy to stop along the way since I can see your questions. What I will do is get into a little more detail of what this Stage 1 public health objectives were and then go into the stage 2 public health objectives, what the differences there are and some of the certification criteria are. And then move both into the public health implications and then also spend some time on some of the challenges that we have seen with the implementation of both Stage 1 and the beginnings of stage 2 public health and Meaningful Use.

First we will start with just the overview of stage one Meaningful Use objectives and again I think we've gone through this in fairly great detail in some of the earlier sessions. But basically on the ambulatory side and eligible professional side there were two measures to choose from either immunization registries or syndromic surveillance. There were two measures to choose from, they were both menu set items and eligible professionals had to choose at least one of these two menu set items as part of the five overall menu set items that they were choosing. But we did see in Stage 1 a lot was that most states were not ready to accept syndromic surveillance data on the ambulatory side which really meant that the only measure that was available for ambulatory care providers was submission of immunization registry data. On the hospital side, there was an additional measure that was available, electronic lab reporting or reportable lab results in addition to immunization registry and syndromic surveillance. On the hospital side, I think we saw a little bit more of a split among the three measures - most states had the capacity to accept at least two of these measures and many had the capacity to accept all three. Probably the least favorite for hospitals to choose was reportable lab results and not because states weren't ready to receive it, but because it would probably be the most difficult measure. We definitely saw a lot of hospitals choosing immunization registries and then there were several hospitals who had been submitting syndromic surveillance data already and just went with that measure since they'd already been doing that.

For the standards in Stage 1 for supporting all of these measures for immunization registries, we actually had two implementation guides that were referenced in Stage 1. One was based on HL7 2.3.1 and one was based on HL7 2.5.1. Most states did choose to implement the HL7 2.3.1 standard for accepting Meaningful Use transactions for immunization data, some states allowed both and then we did have a few states that only limited message dated exchange via the HL7 2.5.1 message.

One of the challenges I think that we definitely saw in Stage 1 was the fact that we had two different standards. We had vendors who were certified for either one format or the other. Say they were only certified to send the 2.5.1 message because that met their certification criteria for the product, but the state health department or local health department was only accepting 2.3.1 and because of that mismatch the provider using the system could be excluded from that measure. Another one of the challenges that we saw in Stage 1 was some of the variability that was allowed in HL7 2.3.1 message where if a vendor implemented reporting for one provider say, Texas and try to take the same implementation and do reporting in Florida that implementation didn't work across states because there was a lot of local variability within that HL7 2.3.1 message and that's something that we try to address in the 2.5.1 message for Stage 2 that I will talk about shortly.

For syndromic surveillance there were two message standards as well that can be used either to 2.3.1 or 2.5.1, but for Stage 1 there was actually no implementation guide referenced. About six months into Stage 1, CDC did publish an implementation guide for hospital-based emergency department reporting of syndromic surveillance data that we encouraged people to use but it was not required for syndromic surveillance reporting.

Then for electronic lab reports we had HL7 2.5.1 message that was referenced first for Stage 1.

So the other thing that I'd like people to notice that Travis did talk about some is for all of these measures what people had to do was actually just submit a test message. If that test message was successful then the providers had to continue into ongoing submission per the state and local regulations. If that test message was a failure then the provider had met the criteria for Meaningful Use Stage 1. As a big problem with Stage 1 having this issue around only having to submit a test message and many of you probably heard us share the methodology of what we'd like to call "testing queue" where we encouraged public health departments to actually accept test messages as passing so that we would actually have the authority to ask those providers to move into ongoing submission and then fix the issues that were with that message as they moved into the validation process to get into ongoing submission in Stage 1. There was a lot of confusion around exactly what it meant with the test message and what providers really had to do.

So now that we are in Stage 3 you will see that all of the measures actually have ongoing submission to the public health authority. We are no longer talking about just submission of a test message. So for Stage 2 and that goes into effect at its earliest, fiscal year 2014 which would mean the first hospitals moving into Stage 2 will be an October 2013 and the first providers will be in January 2014. So let's talk about the measures for Stage 2.

On the ambulatory side you will see that immunization registry reporting in addition to being changed to ongoing submission has been moved to core so now that is actually required for all ambulatory practices, all of the eligible professionals to submit immunization data. The only exemptions that they would have for that would be if the public health authority is not ready to accept data or if they do not actually give any immunizations.

Reportable lab results are still not applicable to the eligible professionals in Stage 2 and syndromic surveillance has been left as a menu set item on the ambulatory side and now we actually see two other new measures added to eligible professionals for Stage 2 as well. One is ongoing submission of cancer registry data and ongoing submission of specialized registry data. Specialized registries is a little tricky. I think I heard some questions during Travis' presentation about what might count as a specialized registry and we are encouraging public health to think about and be creative about what they would like to accept. As far as a provider being able to exclude out of this measure, they need to make sure that no public health authority or national specialized medical Society is accepting data for a specialized registry.

So just in summary, on the EP side we've got immunization moved to core. We now have three menu set items: 1) Syndromic, 2) Cancer and 3) Specialized Registries. There is no requirement to have public health be one of your menu set items but as Travis talked about there are a fairly limited number of menu set items in Stage two about half of them are public health measures so they are probably going to be choosing a public health measure as part of their menu set item anyway even though they are not required to.

Now let's move onto the eligible hospital side. On the eligible hospital side again we have everything moved to ongoing submission we are no longer talking about test data being sent to public health. And everything has actually been moved to core. None of these measures are in the menu set item anymore and cancer registry and specialized registry data are not applying to hospitals. The cancer registry reporting is not about lab data being reported to public health. It is more about the treatment and initial case report coming from the treating physician so cancer and specialized registries are not applicable to hospitals, but the three measures that we had in Stage 1 have all been moved to core. So as we look at this and think about all the measures that have been moved to core now it is really critical to think about the resource needs that are going to be on the public health side. If we think about all the resources that we had to expand accepting just one menu set item from all of these eligible professionals and hospitals, now we've got four core measures one on the ambulatory and three on the hospital side plus three new menu set items that public health is going to have to be ready for. I think we really need to think about the public health resources, what's needed, how we can partner with our health information exchanges and other partners to make sure that you've got the resources that are going to be required to accept this data.

Let's talk little bit about the standards that are now in play for Stage two Meaningful Use. You will see that for immunizations, reportable labs, and syndromic we actually just have a single HL7 2.5.1 message that is now referenced for Stage two Meaningful Use. Please note that the immunization Registry 2.5.1 implementation guide is different than the implementation guide in Stage 1. It is still 2.5.1 like one of the ones in 2.3.1, but this is release 1.4 approved on July 15<sup>th</sup>. It is slightly different. It is not extremely different, but again it takes a little bit of the variability that was in the previous message formats that was causing some confusion with the vendors and it is actually making it a little more standard so it is easier for vendors to implement that. The important thing I think here for public health to realize is this is going to be another resource issue where public health by October 2013 is going to need to be ready to accept Meaningful Use transactions according to this implementation guide if they want Meaningful Use to be a driver of getting hospitals or providers to submit data. October 2013 for eligible hospitals, January 2014 for eligible professionals. So we've got to be ready by that date for accepting this because remember one of the exclusions is the public health authority is not able to accept data for the Meaningful Use transactions so if we're not able to accept data in this format then we would not be able to accept data for Meaningful Use and those providers could claim an exclusion.

For reportable lab results, we actually were not able to change the implementation guide for the standard because that is a HL7 balloted guide, but there are some new errata and clarifications and those can all be found on the CDC Meaningful Use website , [CDC.gov/EHRMeaningfulUse](http://CDC.gov/EHRMeaningfulUse). And then for syndromic surveillance, we did actually reference a new implementation guide for emergency department syndromic surveillance. Again, just like in Stage 1 we don't have a reference for ambulatory or inpatient submission of syndromic surveillance. Hopefully that will come out sometime during Stage 2 and we can reference that as a recommendation but not as a requirement. The

messaging guide, the implementation guide for syndromic surveillance also has some errata and clarifications that are available on the CDC Meaningful Use website. It is good to make sure that you look at those and understand those errata and clarifications because that's what the vendors are going to be utilizing to certify their systems. Then for cancer registry we actually have a CDA, Clinical Document Architecture that is slightly different than the ones than we have for our other public health measures again because it is the clinical information that's being reported so the CDA is a little bit more rich and allows for that cancer data to be reported.

I'm going to stop because I see that there are couple of questions:

**Q:** If there's anything common for pathology lab cancer reporting.

**A:** I'm not the expert on comparing the lab reports versus the cancer reporting for eligible professionals, but I do believe those are pretty different because it is the data that's different, not necessarily the formats that are used with that implementation guide I did come out of the same group at CDC that did the NCER volume four for the lab cancer reporting.

**Q:** What public health entities will be responsible for receiving the new Meaningful Use data?

**A:** So any public health entity whether they are state or local that would like to receive data that counts as a Meaningful Use transaction, will need to be accepting data according to the standards.

**Q:** Then there was one more question about the IG for syndromic surveillance that's being released Spring 2013.

**A:** That spring 2013 guidance which I believe has inpatient, I'm not sure about ambulatory, that again we can only reference as a recommendation. We cannot make it a requirement because these regulations have actually already been passed and put through a review process so just like in Stage 1 when the implementation guide for ED reporting came out and we couldn't change our regulations we just referenced it as a recommendation and encouraged people to use that. So if you as a state can say this is the way we will be accepting data and it can be get only way they can submit data, we just cannot actually put in the regulations.

I think I answered all the questions there that were about the standards. Let me say this about the standards too, again all of these standards, the errata and clarification documents are what certification was based on. So we've also published the 2014 certification criteria for vendors to have products that meet Meaningful Use. They are all based on the standards and one of the things that we did with the 2014 certification was work very closely with CDC along with guidance from the appropriate organizations for immunization, we got some guidance from ERRA, for ELR got some guidance from CSTE, for syndromic surveillance we got some guidance from ISDS and for cancer registry reporting we got some guidance from NCER on making sure that the certification criteria actually met the public health needs. A lot of the problems that we encountered in Stage 1 were public health departments calling the CDC or ONC and saying we have a provider

who says they are using a certified product to send this data, but the data is horrible. It doesn't even come close to meeting the implementation guide and the kind of data that we are looking for. So we actually worked very closely with CDC across all four of these measures, did a valid test procedure that really tested to use cases that public health would encounter and we actually solicited to some of these organizations some more realistic data to put into the test cases. So all of these measures now have between three and six scenarios that have to be tested and each of those scenarios has at least three sets of data that a authorized testing lab, those are the entities that actually certify the vendor products, can utilize when they go and test a vendor. So hopefully we've avoided the situation that we sought in Stage 1 where the vendors were more just hard coding their systems to pass certification for the public health measures, we've actually made it much more complicated. We have much more detailed testing scenarios and multiple sets of test data so that providers, so that vendors should not be able to hardcode their systems to pass certification. I will say even though we've done all of this work to make sure that the certified products are better equipped to meet the needs of public health, there's still the issue of providers implementing their systems correctly and using the systems correctly to get good quality data out of their systems. We are actually working on some trainings to address that issue as well.

I've just gone through the measures and the standards. The other major issue that came up in Stage 1 and is still going to be in play in Stage 2 is the actual transport. In Stage 1 I think people are very familiar with the fact that transport was not part of certification nor was it mentioned in the Stage two regulations. So issues around transport ended up causing a lot of providers to be able to claim exclusions - not exactly what public health was hoping for. So in Stage two, the final regulation does actually say that the public health authority can actually dictate what transportation method is utilized to get the data to public health so that could be secured FTP, it could be PHIN MIS it could be Direct, it could be web services company, or it could be a combination of any of those. The Stage two regulation also encourages public health to work with the health information exchanges whenever possible to ensure that providers are getting the data to public health in the most efficient manner. A lot of the providers and hospitals have already made connections to the health information exchanges and repurposing those to get the data to public health could possibly be the most efficient way of public health getting that data. So I think people have probably seen this slide before, but I will just go through it quickly.

Scenario one describes a system where providers or hospitals have a completely certified electronic health record where certified messages are coming out of certified technology and flowing to public health. Sometimes they might flow through health information exchange or third-party just as a transport mechanism or they might go directly to public health to the appropriate data stores and applications. I think that's the scenario that most of us expected when we started talking about being meaning use in public health. Really what we started seeing was more of scenario two especially on the hospital side where a hospital might have a completely certified EHR but some of the data that is coming to public health is actually coming out of a separate system like the laboratory information management system or the emergency department registration system. Again, the data is coming out of those separate systems, maybe flowing through an HIE or maybe coming

directly to public health and what we saw in this case was that the providers in order to ensure that the hospitals in order to ensure that these transactions met the requirements of Meaningful Use these as separate systems the LIMS and ED registration systems actually got modular certification. So that they did count towards Meaningful Use.

Then in scenario number three it is similar to scenario number two where we see the HIE actually creating the certified messages on behalf of the eligible hospitals or eligible providers. They are taking data in any format and they are actually transforming it into an HL7 2.3.1 or 2.5.1 message if we are talking about Stage two specially to meet the requirements of Meaningful Use. In that case it is actually the HIE that is required to get certification and we definitely saw some examples of this actually saving public health and hospital significant dollars. In Ohio for example, emergency department data had been flowing for years from many hospitals to the health department. They had all been sending it from their emergency department registration systems which did not get replaced as part of the complete EHR certified product upgrade so they weren't counting for Meaningful Use. The data were actually already flowing in some cases and in some cases they made us switch to make it flow through the health information exchange was action certified to send syndrome of surveillance data so it saved the hospitals from having to go back and purchase a new system for their ED and also saved the public health department from having to go back and rebuild their interfaces to all of those hospitals.

**Q:** So we have a question from Connecticut Avenue believe if the public health authority is allowed to dictate what transport method is used then what is the apparent push to use Direct? Is that directed more to the HIE getting info from providers versus how messages come to public health?

**A:** Yes, I think definitely our health information exchanges are encouraged to use Direct as part of the transport infrastructure that they are building within their states. We do realize that public health might not necessarily be a player in Direct or that perhaps Direct for example in the case of a bidirectional immunization message might not be the easiest way to get the data although it is certainly possible. So what I would say is work with your HIE if Direct is a way that they are already getting data, but implementing Direct might be difficult for you as a health department. You could work with your health information exchange to perhaps have a direct the PHIN MIS translator where they could receive a message via Direct message and then send that message onto you as a PHIN MIS message, that would enable the health department not necessarily to have to implement Direct but the messages flowing through the HIE could still utilize that Direct connection that some providers and hospitals are already using. I believe there was a pilot in Minnesota showing that that could be done and I want to be very clear about that pilot in Minnesota, the Minnesota health department never implemented Direct themselves, the health information exchange passed the messages onto them as PHIN MIS. I think one of the reasons to think about this and how you fit in with health information exchange especially is when it comes to potentially getting funding for some of this infrastructure or reimbursement for some of the work that needs to be done to build this infrastructure, I think public health is much more likely to have a favorable reaction from CMS and Medicaid to funding opportunities if they are working with an enterprise system like the HIE for transport as opposed to building their own point to point connections especially

many point-to-point connections across multiple public health measures. We now have four public health measures plus specialized registries and it could certainly be conceivable that within a state each of those programs has a different preferred transport mechanism and asking providers to support four different transport mechanisms would be certainly a very difficult proposition with the providers and utilizing the health information exchange is a great idea. It certainly takes some conversation and negotiation. We at CMS and ONC can help with those negotiations and we are happy to have those conversations.

I don't see any more questions so I will keep going. I think other people have covered very well the public health implications already, the things that reporting to public health for these measures is going to help us with, so I will skip on to some of the challenges that we have actually seen in stage one. I have already talked about some of them around the different standards, the flexibility of standards and some of the issues around transport. I have some bullet points here that we can walk through and again, any point if the facilitators want to change for people to be able to ask questions along way, I'm happy to take questions along way. We did hear from Minnesota, it does not have direct installed at the health Department and thank you Emily, I am trying to be very clear about that as a present this in the future.

Let's walk through some of the challenges. One of the big issues that we saw in stage one was public health preparing to accept data, utilizing the Meaningful Use transactions. In stage one, 2.5.1 was the only option for electronic lab reporting, syndromic surveillance, and immunization had to be 2.3.1 and 2.5.1. We had a lot of states who were accepting ELR in 2.3.1 only. We had a lot of states who were accepting syndromic surveillance and immunization data as text files/ flat files. There was a lot of work for them to upgrade their infrastructure to accept that data. Everyone stepped up to the plate and we have had amazing success with getting everyone to be able to accept Meaningful Use transactions with very little additional funding. Unfortunately, I think we will be facing some of those same challenges in stage two, however, the differences should not be as great but ELR is staying same. The change to 2.5.1 with the immunization format should be relatively simple for people to accept. There are going to be some challenges. There are a lot of data elements in the 2.5.1 immunization message that were changed to RE - required but can be empty - in order to be more conformant across the country. That does mean that there could be some data elements that a state does not particularly want that could be coming in since those are RE fields. There may need to be some preparation to be able to drop those message segments before the data is incorporated into the immunization Registry. There is definitely going to still be some work preparing for stage two for the new measures. I will stop and I see we have a question.

**Q:** Would it be useful and less costly for public health if there were cloud service for public health that would support multiple public health entities to coordinate all Meaningful Use activity?

**A:** That was from Joel Greenspan and I think that is an excellent idea. And we have seen that model with bio sense where bio sense is accepting that data on behalf of several states. All of those that are participating in bio sense and in some cases, the local health

information exchanges acting as an aggregator but then bio sense is the way that the state and local health departments get that data. I think it has made the system much more easy for vendors to navigate. And public health is still getting what they need. I think it is an excellent question. If that might be more applicable across other public health measures, I think some of our health information exchanges have tried to do that at the state level, but it would be really interesting to see some pilots and models that were multi-jurisdictional across some of the other measures as well. I think the technical issues involved in something like that are probably a lot easier than policy issues. The policy issues probably aren't even that difficult, but it is hard for us to -- on the public all side, accept the fact that someone else is going to be accepting data on our behalf, even though we may have all of the appropriate legal documents and business agreements in place that would allow that to actually happen. I think it would be great, I would love to hear from anybody who would like to do something like that, and we could certainly help you think through to make sure that it would work for Meaningful Use.

**Q:** We have another question from Don. Could CMS at a public health entity incentive to help move Meaningful Use transactions in local and state health departments to help recoup their investments in building the required infrastructure or could local hospitals and providers share their incentive dollars with local and state health departments?

**A:** As far as CMS adding a public health entity incentive, the language in the regulations are more about the people sending the data, not the people receiving the data. There is an issue that was addressed in stage two that is an official to both state and local health departments, where local and state health departments were acting as providers and sending data but they weren't actually eligible for incentive payments because they didn't meet the 30% requirement on Medicaid of having 30% of their volume be Medicaid. One of the main reasons they didn't meet that requirement was local and state health departments providing services don't bill. Starting in 2014, there's a zero paid claims clause that says, even if a provider is not eligible, doesn't get paid for service, as long as it is with a eligible Medicaid client, and that service is something that could theoretically be paid for, it could count. I know it doesn't exactly answer your question, but there are some ways that state and local health departments could work towards getting some incentive dollars but as a receiver of data, not so much. The real way that state and local health departments can get part of this money is through a process called the state Medicaid Health Plan, where you put into that state Medicaid Health Plan the infrastructure required to on board providers for Meaningful Use, and then you put in something that is called an Advance Planning Document and you can get reimbursement at an allocation rate for the percentage of Medicaid providers that are actually using the system. That is really the main way that public health has to get funding through Medicaid. We have about eight states that currently have approved plans and several that are looking into it.

**Q:** We have a question from Washington. If HITECH is intended to raise the bar for HIT, why is CMS only supporting Medicaid and not Medicare?

**A:** I think that question is more about the reimbursement for the states as Bryant has pointed out. The reimbursement rate for the states to build infrastructure is only for Medicaid providers. Medicaid does expect other payers to contribute. Unfortunately, the regulations, the way they are written currently, there is no way to provide infrastructure for

the Medicare providers who are participating in this project for public health only for the Medicaid. It is a problem that everyone recognizes. I'm not sure if there's a short-term answer to that question. I think long-term people are interested in looking at that.

I will just keep going through some of these slides. I see a lot of comments from people who are interested in the cloud service idea. I will share my contact information at the end because I would love to hear from people looking to do that.

Public health domains included in the Meaningful Use regulations have varying maturity levels. For data exchange, that was definitely one of the issues we saw at the beginning of stage one. I think everyone has really come to the table and learned what they need to do. We've got a really outstanding technical assistance team at CDC by Sanjeev Tandon, who works closely with all the CDC partners to make sure that they understand what is needed. We already talked about the lack of transport standards and implementation guides.

This first bullet on the next slide - coordination of Meaningful Use activities across domains, I think this is going to become really important in stage two. What we saw in stage one was that most public health authorities really focused on one of the Meaningful Use measures for their state both with eligible professionals and eligible hospitals whether it was syndromic or immunization. So there was really only one transport mechanism, one infrastructure that needed to be supported for Meaningful Use. Once we start talking about supporting a Meaningful Use infrastructure across all of the public health domains, including possibly specialized registry reporting in addition to the new cancer requirement reporting, it will be really important to make sure that those public health domains within the state are working together. I will say the CDC is working very closely across domains, the immunization people talk to the cancer people all the time, they are talking to the syndromic and ELR people to learn best practices and lessons. Hopefully, we will see some of the funding coming towards for states to be also be more coordinated across these domains as well but that definitely will continue to be a challenge that we will all have to work on. Collaboration with the state Medicaid offices, I have talked about that and Bryant has brought up some of the challenges there. We do have like I mentioned, about eight states that have approved plans to get to some Medicaid funding for their public health infrastructure and we're working very closely with ASTHO and other groups to make sure the public health has clear guidance on what they can actually put into the state Medicaid health plan that has a good chance of getting funding.

One of the other issues I think is captured in the next two bullets that we saw in stage one. The capacity to deal with the sheer volume of providers and hospitals asking to submit test data and now in stage two they will be asking to be moved into production as well to meet those requirements. I think Meaningful Use is a very different driver for getting data submitted to public health. It is aimed at providers that public health might not care about. Public health definitely has priorities for the types of providers that they would like to on board. For electronic lab reporting, it would definitely be important for public health to go after the large submitters before going after a smaller hospital that might be submitting 20 or 30 results per year. On the immunization side, it's definitely more important for those to

go after those large pediatric populations and that large pediatric provider actually may not meet their requirements for Medicaid so they may not even be Medicaid or Medicare incentive provider as part of the Meaningful Use program. There are definitely competing priorities and a huge amount of work that is being asked to be done on the public health side. I think having the communications and working with the appropriate partners to make sure that there is collaboration across the domains and again, this is a place where potentially working with the health information exchange and even our regional extension centers could help make sure that we are all successful as we try to do this work. Local implementation guides, we've already talked about that one – the certification criteria for stage two, I think really does address most of those issues. I encourage everyone to go to [health.IT.gov](http://health.IT.gov) and actually look at these certification criteria for the public health measures. Those were actually signed as final yesterday I believe. We've had draft guidelines out for comment since October and they have since been signed as final test criteria.

We're running out of time, so I think I will skip through some of these we have talked about. The testing and on boarding in stage one was definitely a major problem. We came up with the “testing queue” methodology. Now that we're moving into stage two and providers have to be in ongoing submission, we have the stage 2 public health advisory group led by public health informatics Institute with representation from ASTHO, NACHO, NCER, ISDS, and state and local health agencies. They're really coming up with some guidance and best practices for how we best implement stage two, just like the guidance we had around stage one. I think that Jim Kirkwood will be talking a little bit about that in the next presentation. We have talked about modular certification and transports. I do want to make sure that everyone is aware of the Meaningful Use public health technical assistance team to provide focused policy and technical expertise. We can help identify best practices that have already been put into place to resolve similar issues and the team is very good at documenting the issues so we that can get you written materials on other similar issues that have actually been resolved. We can bring together people from CMS, ONC, CDC, all of the projects at CDC, we can bring them together and we can get everybody at the table in a single conversation to resolve the issues. A lot of times, the problems can just be miscommunications. And so that team is really good at getting the right people together at the table to have one conversation to resolve the problem. And if Sanjeev is on the call, he can tell me how many issues they have actually solved so far. It's a huge number. If you do need technical assistance to address any of these issues you can simply send an e-mail to [MeaningfulUse@cdc.gov](mailto:MeaningfulUse@cdc.gov) with request for technical assistance in the subject line and they will immediately get back to and start organizing. They will get back to you with an answer or organize a call to address the problem. In addition to the [MeaningfulUse@cdc.gov](mailto:MeaningfulUse@cdc.gov) as a contact, you can also e-mail me directly at [James.Daniel@hhs.gov](mailto:James.Daniel@hhs.gov). We have about 10 minutes remaining so I will stop for additional questions. I am not seeing any additional questions. Sanjeev has told us we've had almost 200 issues resolved so far, we're at 188. It doesn't look like we've got any more questions so I will turn it back over to the CDC facilitators.

## **Q&A**

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**Q:** Seth has asked a final question about comments on public health reporting for stage three.

**A:** I think Art may have gone over some of that earlier but I will say that we have the current request for comment out for the stage three recommendations. You can find information about that on the stage three recommendations on health IT.gov. Those comments are due January 14. Some of the things that you will see in there as recommendations for stage three are bidirectional immunization reporting, potentially case reporting as part of stage three or maybe a later stage, potentially adverse event reporting in stage three or a later stage. And the other measures have stayed the same. They are still not a recommendation to ambulatory onto the core measure, the others I think either stay where they are or moving into core for things like cancer. I think those are the major issues in stage three that you want to make sure that you review for your comments. Again, my contact information is [James.Daniel@HHS.Gov](mailto:James.Daniel@HHS.Gov) and you can also send questions to [MeaningfulUse@cdc.gov](mailto:MeaningfulUse@cdc.gov) and I believe all of the slides and recordings will be made available.

**Q:** Cancer reporting and specialty registry reporting, we are really aimed at what is currently going on.

**A:** Let's talk about cancer reporting first. That was aimed at the physicians being able to report cases, not the hospitals being able to report the lab information, which is why I think they aimed that at the eligible professionals. Specialty reporting was aimed more at giving providers credit for what they might already be doing, and I think the things that they thought were already happening were really on the provider side and not the hospital side.

**Q:** The FDA has an adverse event requirement, how is that different from what might be reported to CDC?

**A:** If you look at what is in the proposal for stage three and potentially beyond stage three, that adverse event reporting is actually talking about electronic adverse event reporting to FDA. It would be the same, just doing that in a more automated fashion out of the electronic health record.

Wendy has provided some clarification, Wendy Blumenthal from the CDC cancer registry program. Hospitals do report more than lab information for cancer, but they have a well-established method for doing so. And many of them use their hospital cancer registry. That was another reason why the Meaningful Use measure was aimed more at providers, thank you Wendy.

### **EHR MU & PH: Getting Ready for Stage 2 Meaningful Use - Jim Kirkwood & Dr. Bryant Karras**

Thanks Jim, great to have you with us. This brings us to our final presentation of the evening. Excited to have with us Jim Kirkwood from ASTHO, Association of State and Territorial Health Officials and Dr. Bryant Karras from the State of Washington Department of Health. They will be talking to us about getting ready for Stage 2 of Meaningful Use. This will be more of an interactive session with the speakers having a dialogue with each other and sure to keep the audience engaged. With that I would like to more formally introduce our speakers:

*Jim Kirkwood serves as ASTHO's Senior Director of e-health, overseeing ASTHO's work on public health informatics. This includes providing technical assistance to state and territorial public health agencies on public health informatics and national health information technology (HIT) activities. Prior to ASTHO, he worked at the New York State Department of Health providing technical assistance and capacity building to local health departments in epidemiology / preparedness planning.*

*Dr. Bryant Karras is a Physician, an Engineer, and a Public Health Informatician for Washington's Department of Health. He has a clinical, technical and practical problem-solving approach with a background in Biomedical Engineering, Internal Medicine, and Medical Informatics. Dr. Karras teaches and mentors Masters and PhD students at the University of Washington and has developed Informatics competencies, curricula and continuing education courses, both in the USA and internationally. As Public Health Informatics Officer he supports the informatics needs of Epidemiology, Health Statistics and the Public Health Laboratories. He leads the DOH cross divisional efforts to prepare public health for meaningful use and changes to public health practice that Statewide Health Information Exchange will bring.*

The thing about what will be happening for stage two, public health agencies are really going to be thinking about quite a few things. They will be thinking about a plan for the reporting period of stage two because as we have heard before, instead of just one individual test and then a follow-up, a pass could be a fail at the same time, providers and hospitals will be looking to send data for the entire public health reporting period. What that comes down to is which types of exchange are going to be offered and how? Will HIE be used? A lot of public health agencies will be looking to multiple providers want to come online and try to pull together a bunch of different individual connections, point-to-point connections will be difficult. Working with HIE if they are available to use and the Public Health Agency can get the data at once. HIE will be useful to a lot of people. They will need work on providers with registration and also work closely with HIT coordinator and Medicaid agency. HIT coordinator about general HIT issues, working through HIE and also the Medicaid agency when it comes to working with Medicaid on Meaningful Use providers but also working with them hopefully if state public health agencies can access 90/10 Medicaid match. There is also a big issue which we had work done, a lot of states have worked on about organizing internally and educating their staff so they truly understand what the implications are for Meaningful Use and what the implications are for multiple states.

Stage 2 Meaningful Use includes new guidance on processes for public health reporting. It includes a declaration for public health capabilities and when we think about these public health capabilities, it is going to be what a Public Health Agency truly can do, how are they accepting data, and then how will that be in a centralized repository of Public Health Agency repository information, which we have heard a little bit about before. And a provider or hospital might be registering with a Public Health Agency to initiate ongoing submission and we will see a very nice demonstration of that from Bryant Karras, a slide set, from Bryant Karras, Washington Department of Health, on how they register providers right now for Meaningful Use and all the information they give out to them.

**Q:** What is the deadline for Public Health Agency declaration?

**A:** I don't think it has been made official yet but I am working on the assumption that for capabilities for receiving messages from hospitals, eligible hospitals, we are working on October 1, 2013 deadline for declaration and for Eligible Providers and Professionals, we're expecting it will be the first of the year 2014.

Public health agencies, the providers will be expecting to work with a Public Health Agency for the duration of what is going on. There's also something in the Meaningful Use regulations stage 2 about written request from public health agencies, that you give 2 written requests over a certain period of time and if the provider or the hospital does not respond to the Public Health Agency, then the Public Health Agency determines they have not met Meaningful Use. No Public Health Agency would want to get to that point with a provider or hospital knowing that the provider of the hospital has to meet all the objectives within Meaningful Use, equally and if they miss one, they miss all of them for their incentive. And then there's acknowledgments to the eligible providers and hospitals about requiring some type of communication from the Public Health Agency that a provider was able to submit relevant public health data to the agency. Which means, and this is another issue that came out from proposed rule from CMS and ONC and then the revised rule. One of the concerns about the original notice of proposed rulemaking stated that they expected the Public Health Agency to do a written communication to the provider at the hospital. A lot of public health agencies and programs and associations have commented that we would like to determine what that communication is looking like. You can imagine trying to send out a letter on the state or local Public Health Agency letterhead each time would be very difficult. Whether it's going to electronic communication acknowledging the submission and the receipt of information that is useful for public health, it will be determined by the Public Health Agency and in this case for generally, the Meaningful Use stage two rule itself, a lot of comments that public health did make were very -- public health was very successful in getting their comments included and considered in the final rule that came out.

One of the things that has been set up and this is done with ONC, CDC, and CMS also, is the setup of this Public Health Reporting Requirements Task Force. Some of the activities of it at least was started at the last in person meeting of the Joint Public Health Informatics Task Force that met and was discussing these issues about Meaningful Use. How exactly what will happen when a provider or hospital is looking to find out what a state or local health agency in their area is going to be doing to send Meaningful Use. Who is that they send to? There've been a lot of associations, Public Health Agency involvement, CDC Immunization Registry community, ASTHO, NACCHO, and a lot of other CDC specific programs too looking at what's going to be happening. Looking at the public health declaration process, and the reporting requirements task force we look at certain focus areas or work lanes that have been set up for these groups. And one of these have been the declaration process and declaration this is process by Public Health Agency of saying exactly what they are ready for in this CMS repository of information public health agencies. Business processes trying to streamline business processes on registration of intent, on boarding or provider or hospital to be ready to work with the Public Health Agency, and business processes on acknowledgment of ongoing submission. And then

there is been a couple other work groups that people wanted to set up on transport and specialized registers. Some great work has happened through the support branch at CDC along with grantees of IAS support branch and immunization registries, looking at what transport is useful to -- for immunization registries, that will be useful for the future looking at bidirectional exchange and hopefully this group will be building on that and hopefully using a lot of that input that is been included in there.

And as we talked about, it leveraged some of the work that have been done during the previous meeting that happened in October of this year. This all started because of this new rule and the discussion and when looking at the Meaningful Use final rules, you always have to remember that there is a rule itself in a discussion of the rule that talks about the implementation of rule and provide some clarification of the rule. When you're looking at the rules as they are developed, remember to go back and look at the clarification too. Again, to clarify the timing issue the hospital must determine if the Public Health Agency has a capacity to accept electronic data using specification prescribed by ONC for public use within the first 30 days and looking to the second underlined area and determine whether the Public Health Agency has a capacity. CMS anticipates developing a centralized repository for this information including deadline for the Public Health Agency to submit information. If the Public Health Agency fails to provide information in this repository by the deadline, the provider could claim an exemption or exclusion -- not an exemption, an exclusion to that particular Meaningful Use objective. When we think about the declaration process, it's a process associated with CMS repository and again as we said they will have to declare what they are getting the public health agencies providing objective readiness data into the repository so a provider can look at it and understand who they will be reporting to. And thinking about what the implications are, they have to populate it by -- they have to say publicly what they will be ready for. They will have to declare that they do have the capacity to bring on providers. They will determine the provider types to support the objectives and if they don't provide that information, there will be an exclusion.

The public health Meaningful Use declaration process requirements recommendations: There are a few, recommendations that the task force delivered about requirements and recommendations for the declaration process to the CMS, and while those recommendations were included, there is no guarantee of what is actually going to be in the final repository that a Public Health Agency could use. Some of the general things that people included, was to allow that the Public Health Agency to declare readiness. This is important because in a couple of states, and a couple localities you could have requirement for a provider or hospital to report to a local public health agencies for one item, say immunization, and then to another one, say for electronic lab reporting. There could be some confusion on the provider level of who exactly they are reporting to. Also, it should only contain information on public health agencies that provide readiness. Meaningful Use objectives will support Meaningful Use objectives will not support and that information has to be available for hospitals by beginning of October in 2013 and by providers a month before December 1 of 2013. Which is only a year away.

Some of the other requirements would be public health agencies should be able to validate information in a centralized repository prior to publishing so they can see what is

being submitted. CMS should be able to communicate with the providers, with Public Health Agency before the deadline. Identify public health agencies that have submitted data to CMS. And again a declaration will be for the fiscal or calendar year but we hope that a Public Health Agency should be allowed to update their readiness throughout the calendar year. This is really important for those public health agencies, we have seen this with stage one were a lot of public health agencies thought they would be ready and could get ready for Meaningful Use stage one but they found out that they had to go off-line for a little while and come back on after some period of time because just getting ready.

Declaration should be made by the public health authority. If you're going to be requiring public health reporting, the public health authority has to be the person whether it is state or local level that is determining we can require this of the provider or hospital. That have the legal authority and the objective say particular public health practice. And finally one of the things we wanted to encourage though it is not required, you can imagine the difficulty of this, encouraging the state and local public health agencies within a particular state to determine and say this is exactly what we are ready for. And then come to an agreement on the state has the authority here, all the data should go somewhere else or another. That's some of the things we included. Some of the requirements and recommendations on specifically the data elements that you should be supplied about public health readiness, Public Health Agency contact information, not necessarily going to be an individual with their particular name but it could be MU@StateX.gov and then also transport, what method of transport is being used to support Meaningful Use for that particular objective? It's important to think about that, as public health agencies start to think about how we deal with healthcare data in our state, how do we want to streamline the processes for reporting for states? And then the date and time. The date and time the PHA can technically receive data and accept data.

In conclusion, the repository would allow providers to more easily locate public health agencies and that has been a concern of providers and vendors especially when dealing with providers and to help the provider meet their Meaningful Use objectives. Again, it could provide some standardized information about public health capacity that a provider or hospital, depending on who they report to - the state or across systems across states or systems within a state across boundaries can really look to and see what is the truth.

Business processes for stage two, next steps are works in progress are about registration of intent of the provider. How would that work in dealing with the state or local Public Health Agency? And how would the on boarding process go? What is that really going to look like? It's important for providers to understand they can't show up on day one and then be meeting Meaningful Use for stage two on day two. And we talked about some guidance documents, communications going out and special workgroups on transport and these other registries that are really undefined in stage two of Meaningful Use.

One of the things I want to talk about quick before we get onto the description of these really nice websites that are out there is working with Medicaid. We had talked a little bit and heard that throughout the session today about the 90/10 match for Meaningful Use. It is cost allocation which means that it is a percentage, as you can imagine, there is a percentage for Medicaid if it's acceptable to CMS. The activities would include 90%

reimbursement of the cost for Medicaid providers or hospitals. You can imagine if there are -- within immunization Registry there's activity going on that might be acceptable to CMS, they would reimburse 90% and say 40% of kids on Medicaid in that particular state or that particular locality. As Jim said, there will be guidance coming out hopefully soon about what exactly is acceptable. I think a lot of states have applied and those have been accepted for something hasn't been quite clear to them as to exactly what would be successful. And even the states that are hearing things now are still trying to figure out what exactly will be successful and what is a viable option for public health funding. We've heard from presentations of what has been successful up to this point. Supporting a single gateway to public health Meaningful Use system, so if there is some state trying to implement a universal public health node, whether it is through HIE, CMS has indicated they have been willing in the past to allow funding for that. And also on boarding of providers and that would be specific to providers that are involved -- Medicaid providers, not necessary Medicare providers.

Another important thing I think people have done in Meaningful Use, and these websites have really evolved over the past year or so are these websites that really communicate to a Public Health Agency. Everybody knows that the people communicate and Bryant below has showed a shorter URL for Washington state down below ([www.doh.wa.gov/healthIT](http://www.doh.wa.gov/healthIT)), so feel free to click on that because that is one of the websites we are going to show you in a couple screen captures. But we also have some very nice ones for Maryland and Nebraska Department of Health and Human Services as well. What are the things that people have been happy with when they have done their website? The big thing is being very specific. They are specific about whether Meaningful Use is ready and they even include a date of readiness (i.e. "As of December 18, 2012, we are accepting new providers for on boarding for immunization.") And you'll see those on a few of these websites. They are explaining what transport mechanisms they are using and for which objectives, and they are saying which accepted message format is used. HL7 2.3.1 or 2.5.1 and they are also providing contact information for a person or for a general Meaningful Use public health at the state website or at the state domain name. And also, in the case of Washington State, they even included very specific steps in the process and the length of time it will take for onboarding. We've seen those for a lot of the immunization registries while there might be an implementation guide specific for the state, they will also include more guidance for the state on exactly what is going into this process of submitting data electronically to the state via HL7 message which is great.

As we said, you really don't want providers or hospitals coming to you one day before the beginning of the reporting period and expecting -- them expecting to be on. You want to be as upfront with them as possible so they understand they need to be ready for this process very early on. This is Washington state's website and after I go through this quickly we'll have Bryant talk a little bit about it.

You see they have six steps of enrollment to production. And what they have explained for electronic laboratory reporting on boarding process. Very specific, they will tell you exactly what they're doing. Then they go to the enrollment and they have an enrollment form, and they say again, if we look around at the bottom here, this is the HL7 2.5.1 ELR message and it must come from a certified health IT product. Behind that there is a definition of

what those products are and then on the enrollment form, they're asking the hospital in this case to say, which objectives are you working on, what stage of Meaningful Use are you working on, and later is when we get toward in stage two there could be some providers trying to meet a different stage of Meaningful Use and which quarter do they expect to be a testing. And they ask for their information. NPI, etc.

Can you hear me okay?

Looking back of the previous stuff enrollment now with official terminologies, I will have to turn that into "registration" since that is the term that seems to have matured. We worked on this webpage six months ago. The terminology has evolved, but one of the most important things that we did was put that question in on what quarter are people planning on doing their attestation. So trying to get providers and hospitals to think ahead and give us advanced notice of when they're going to be working on it for our planning purposes so we can know how many people we will be needing to do the on boarding with during a given month or given quarter. The first year of stage two will be particularly -- it will be different from the rest in that it is a 90 day window that people are doing their ongoing submissions. They may not all hit at October 1<sup>st</sup> but when they do hit, they will expect to be engaged and are going to want to be on board and in production and interacting with us in time to make their attestation.

One of the other things I would like to point out, on this page and the next page is that Washington is really relying on some of these national activities that have been out there like the reportable condition mapping table so the hospital can see the SNOWMED codes used for reportable conditions.

In the pretesting phase, if you go back to the pretesting, we ask that they hit against the MQF and then actually present to us their reports on how they did against the MQF. So they are essentially getting some feedback, pre-feedback without the state actually having to go through a message -- looking at the HL7 message to see that, is it totally gobbledygook, or useful, and you want to get to that baseline level so the Public Health Agency can really work with them and put some time in with them.

In testing, they're talking about the different types of transport mechanisms that the Public Health Agency is going to use, and then going into further they explained, what Jim had talked about just a little bit in his presentation. And in your case Bryant, you wanted to be upfront with them about being in queue. Can you talk about that a little bit?

One of the things that is still very true, there are subtle differences in the six steps between syndromic surveillance and ELR. They are not exactly identical but we try to make them comparable so that a given provider who is going through both at the same time understands the terminology and can navigate through it. In terms of being upfront with them, one of the things that we ask several questions on page two and page three of the registration or enrollment form, we ask information about their patient volume. And we are upfront about -- we use this information to do case-by-case selection of how quickly a given provider moves through a queue. If they only see 20 patients a day and they are in

private practice, they will not move through the queue as quickly as a group practice that sees 5,000 patients a day because from our standpoint it is the same amount of work for that on boarding, so we need to make some decisions about prioritization. I think this may change some when we get to -- there's a question that we will have to add to our on boarding questionnaire. If we receive the 90/10 matching funds we will ask if they are a Medicaid provider. And if they are a Medicaid provider, we may have special support funds from 90/10 matching which will give us access to additional on boarding staff, and we may be able to prioritize them but I think it will be interesting to see what happens in stage two with all these changes.

And last thing I would like to note is that when you have someone in queue you are affirming to them that you will be submitting during your normal way of reporting whether it is via fax or phone or mail for the normal reporting requirements for the Public Health Agency to ensure that the Public Health Agency doesn't lose data it would have gotten through the some boarding process.

That is the point you're trying to make. Absolutely. One of the misinformation that we don't want to foster is that once they have made the connection, they are done. The most work intensive piece of this is the validation - the work of comparing that paper message via fax or what have you against the new HL7 message. And that validation process actually involves workflow all the way down to the local health jurisdiction department. Who in our state, the home rural state is actually the acting entity, and we work very closely with the local health jurisdictions to validate that they are just as happy with the new data stream as they were with their traditional reporting mechanisms before we tell the providers to turn off anything.

We will move on from discussion of the Washington State Website on boarding website to some general discussion about Meaningful Use and I think at this point it would be great if the people that are still on out there can e-mail their questions or share information on how they might be doing something to prepare their state for Meaningful Use.

## **Q&A**

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**Q:** One thing we talked about mostly was education at the staff within the agency. Not always think about Medicaid or Medicare. How did you educate them? How did that go within your Department of Health?

**A:** Education within the department, one of the things that we got a little bit of a jump on is that I've been tracking this since 2008 and 2009, and started making presentations to leadership at the department about what was coming, how we needed to get ready for it, and perhaps as a result of jumping up-and-down, warning people that the sky was falling, they put me in charge of Meaningful Use for the agency. Be careful what you wish for. I was put in charge of creating a cross divisional Meaningful Use workgroup and gathered people who I projected might be affected by Meaningful Use. I was pretty accurate in getting the right people on the group. We have a couple of people who didn't make the final cut for stage one that got involved early, but it was still helpful to have people all

across the agency participating because they could anticipate what was coming in stage two, and ultimately in stage three. It wasn't having to re-educate the agency.

Another important thing we did was that we created -- not just educating and informing, we pulled together the decision-makers from each of the different divisions, the Chief administrators and assistant secretaries that ultimately had decision-making over these programs, and kept them informed of what was coming and gave them the ultimate say so on the priority list of what gets connected to the health information exchange and how do we designate what we are ready to do for Meaningful Use. Workforce education is a huge thing. That is something that everybody is clamoring for and there is a separate workgroup generated that is trying to move forward on this. We engaged with Bellevue College, who was one of the ONC recipients of training dollars. They were the head for the entire northwestern region, multistate effort to retrain displaced IT workforce. And they created a 10 week certificate module that we had 40 of our IT staff go through that gave them the 101 and 102 education on what is Meaningful Use, what is health IT, and gave them a lot of the building blocks to really ready our agency for this.

And then we received a question. The question was about whether the Supreme Court decision on ACA this summer affects Meaningful Use at all and it should be clear that Meaningful Use is from the HITECH Act which is the American Recovery and Reinvestment Act commonly known as the stimulus. Two very separate things.

**Q:** One of the other questions that we wanted to ask about also was how is your department working with HIE and the Medicaid agency? Good mentioned you were looking to apply for 90/10 match funding.

**A:** We are working very closely with our sister agency, and Washington state, the Department of Health is not the same department as the department that runs the state Medicaid program. That is our Washington healthcare authority. It is coincidentally now after reorganization the same agency that is the state designated entity for the statewide HIE. They have at least the ability to coordinate with themselves on those two fronts. But for the public health measures, myself as the informatics officer and this coordinator was designated as liaison to the healthcare authority. Working with them on coordinating our -- a common message so that we have unified messaging coming out from both agencies about what providers should be doing for Meaningful Use. And then I am working very closely with them on an IAPD, Implementation Advanced Planning Document, that Jim Daniel mentioned in his presentation. Which allows a cost allocated 90/10 match request for activities. Working with our state HIE, one of the first things that we are targeting is electronic laboratory reporting. Our HIE is already up and running in Washington state and one of the first things that they prioritized were laboratory results. It was a logical follow-on to have electronic laboratory results to public health be a prioritized message type that we get transport to us through the HIE. The logic there is that by using the state HIE instead of investing in point-to-point connections, we can focus on the harder work or the more complex work of validating the contents of those messages, and have the HIE work on the nuts and bolts of the -- of transport of those messages. So it is a nice division of labor there.

**Q:** A few states have been asked to -- there was a letter from Dr. Friedan a couple of years ago or maybe a year ago from the CDC to state public health officials and others about designating a Meaningful Use coordinator within a state, that's going to have a policy level responsibility for coordinating and implementing Meaningful Use within the state. Has Washington State on that?

**A:** Yes, we did. That was me. And I think in a couple of the CDC – ELC grant asks for the informatics designated point person. There is some convergence across the CDC. Not just from the upper leadership, but I think that one of the things that it has done in our agency is instead of just focusing on areas that have traditionally interacted with CDC on informatics issues or infectious disease programs, this Meaningful Use attention has elevated the necessity for the court nation across the agency. And they changed my title from informatics officer to Chief Informatics Officer so that I had responsibility to coordinate across the entire organization, not just the division where most of the work had previously resided. Real important thing.

**Q:** Can you talk a little bit about communications between -- from the Public Health Agency to the providers in hospitals and how that has changed over time?

**A:** In the early days, it was mainly myself attending informational meetings that the health information exchange and the healthcare authority and our state designated entity were hosting with providers. This is back in the time before the HIE was even active. And getting information out and dispelling myths in many ways because people assumed what their vendors were telling them was true - that most Department of Health can do these messages. And it was getting the message out ahead of that, saying yes we are able to receive all three message types in Washington State, and communicating that. More than two years ago, we got up a webpage, the one I shared with you, at health IT, we also have a webpage that is joint between all of the agencies in Washington that are affected by Meaningful Use and the HIE and it has links to each of the different program areas. That has done a lot to drive providers to accurate information, rather than myths and misinformation. In the last three months, four months now, we have created a communications plan with the healthcare authority, or we have walked through what are the key messages we want to get out to providers either on the hospital side or eligible professional side. And using that template of message has allowed them to give a consistent message and us to give a consistent message and we have told our webpage around the framework of that communications planning document. And that has really helped us to have coordinated efforts in this path. I can't believe we are not getting any other questions.

**Q:** We got a question from Bill Brand from the public informatics Institute. Was Washington State able to consolidate around transport across all Meaningful Use programs and other programs as well?

**A:** That is an excellent question, Bill. You're asking it because you know that is a very difficult one to solve. At the moment, our plan is focused on -- our plan is focused on two message types that we are consolidating the transport between. One is outgoing message, newborn screening, which is not part of Meaningful Use but was one that was completely under the control of the Department of Health. We used it as a test case for interacting with the health information exchange. Since we're the ones that generate the

message, we didn't have to coordinate with a partner on it. That one is exclusively going out through a pipeline to the statewide health information exchange. If a provider wants to get rid of their paper envelope, newborn screening message, their only solution is go through the HIE and the secure channel that that enables. I just saw another -- related question, that I will answer right now. We are hoping that newborn screening is part of the consolidated CDA and will be part of stage three. At the moment, we are following the NLM 2.5.1 message type for newborn screening.

We should note, so that we are talk about Stage 3 and will it be in there, the comments are due on January 14. If there is interest in newborn screening be included, feel free to comment that to the FIT policy committee.

The inbound we are looking at ELR is the first one that our senior leadership has approved and makes complete logical sense to migrate to using the health information exchange and using the same single catcher's mitt or umbrella to catch inbound messages coming to the Department of Health. That message type is very similar to newborn screening in many ways. Although it is an inbound message coming from other hospitals, not our own LIMS system sending an outbound. Those two are going to use the same mechanism and the same message handling queue or message queue management within our agency. A real tough question is looking beyond that. Will we use syndromic surveillance through the same mechanism and will we use immunization through the same mechanism? Both of those systems have a history, a legacy of point-to-point connections in our state. It is going to be a little bit more difficult transition, replacing those point-to-point connections with the new, unified entrance point for the agency. In terms of sustainability, it is really the only logical approach. We estimate that it takes about half an FTE to maintain every 14 point-to-point connections to our agency. And in stage two, if all of these communications become core and required, not optional, we are going to have hundreds if not thousands of people requesting to connect to the agency and the only sustainable mechanism I can see is to take advantage of using the statewide HIE to bundle those transport of those messages.

**Q:** We see question from Seth Foldy who asks will health departments be able to find a toolkit or central site to prepare for Stage 2 communication with eligible providers? What is going to be out there for public health agencies to use in their communications?

**A:** Something that we could do and others whether it's ASTHO or the other associations that are involved in -- one of their systems like ARRA and CST and others is to provide those best practices that are out there for committee getting with hospitals and eligible providers about Meaningful Use. For stage two, CMS has some very good tools out there and checklist and other things about preparing for Meaningful Use. But when it comes to reporting to a PHA, the information about the central repository that we talked about will need to be included in any kind of toolkits that would be out there.

**Q:** Any sort of advice you have for states or lessons learned in preparing for Meaningful Use that jumped out at you?

**A:** Three quick things in the remaining four minutes.

1. If you haven't already done so, find some poor person who is willing to be your Meaningful Use coordinator. It is helpful to have someone with vision about how this will work across your whole agency and make sure that person communicates across program areas that are both currently affected and will be affected in the near future. Cancer registry is one that came up in discussion earlier.
2. You need to invest in your staff. Make sure they get the support for this crazy amount of work that is coming their way. Whether it's online training, reassurance of how critical they are as you go forward year-to-year budget so you don't lose them to better job offers.
3. Do plenty of planning, especially around communications to get out ahead of this. Work on your webpage and work on automating as much as possible this onboarding process in terms of the registration process because in the early days of this work, I was in the critical path of all messages. People would either call me or e-mail me to find out what to do next. It went from one message a day to multiple messages a day. You need to very quickly try and automate as much as you can so you can get one person out of the critical path. And still have electronic documentation you can use to start making education about how people get on boarded.

**Q:** We received another question from Ashley Dixon. You mention this use of the state which HIE to better manage and produce connections but in Texas, they have 12 local HIE's across the state. That seem to be different levels of maturities and what suggestions do you have in this particular case?

**A:** One comment was that we received from ONC was that in the Public Health Agency, seeing this -- working possibly as a network of networks model. A state the size of Texas or the size of California trying to network those networks that exist together and also a Public Health Agency should consider that those 12 connections with the HIE will be better than the thousands of point-to-point connections that could be existing if all providers wanted to get on or on the hospitals want to get on. Do you have anything to add Bryant?

Especially in states like Texas or California, where the population is such that a single state HIE may be overwhelmed onto itself. I agree, 12 is better than thousands. But I do think that wherever possible, in our state for example, our statewide HIE will bring on a regional aggregator. Some of our long-standing regional health information organizations are joining the statewide HIE as an aggregator so that the statewide HIE becomes the networker of networks. So wherever possible, look to working on simplifying your process.

**Q:** Barb Weathersby, on Washington's website and Barb I don't think I should let you ask questions about Washington's website. I am still mad at you. In step four in queue eligible hospitals who have successfully submitted qualifying test messages are placed into the queue. Is there a maximum time limit for it to be in queue before the validation process starts? This is a great question. We're out of time.

**A:** If Jim is still on the line, one of the things that ONC did was create the in queue process. Which allowed in stage one allowed us to get people into the queue of testing and that enable to do attestation. For stage two, we are treating the on boarding process as a whole and once you are in the queue, as long as there is no nonresponsive

interaction between the two parties, we are treating that as they are still online and still actively working on to production. Hopefully there is no time limit. That allows us to prioritize where we have the resources and who we can work with first.

Thank-you Bryant. Thanks for joining us on this. Now we will turn it back to the CDC.

### **Concluding Remarks**

It is now 5:30pm on the east coast, which means we are at the end of our virtual event. We are thankful to all our phenomenal speakers for taking the time to share such valuable knowledge with us today. And we thank our audience for joining us and hope you all benefited as much as we did.

I just want to let the folks on the call know that we will be posting the audio and transcription from today's sessions on our website at [www.cdc.gov/ehrmeaningfuluse/](http://www.cdc.gov/ehrmeaningfuluse/) , so look out for that. Also, if you have any questions about our virtual event, please email us at [MeaningfulUse@cdc.gov](mailto:MeaningfulUse@cdc.gov) . Once again, thank-you and good night!

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