Real-Time, Real-Talk Teleconference

Moderator: Lisa Hines
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11:30 am EST

Coordinator: Welcome and thank you for standing by. At this time, all participants are in a listen-only mode. During the question and answer session, please press star-1 on your touchtone phone.

Today's conference is being recorded. If you have any objections, you may disconnect at this time.

I will now turn the meeting over to Ms. Lisa Hines.

Lisa Hines: Good morning. And thank you all for joining our first Real Time/Real Talk call. I am Lisa Hines, Senior Advisor for Communication and Outreach, for the BioSense Project, and I will give just a short introduction to the call. You will then hear briefly from Lynn Steele and Jerry Tokars who will provide some updates about the program. We want to use the majority of the time we have available to hear your questions and discussion.

As mentioned, we will host these calls quarterly, and this is our first call. We began these calls based on feedback that we received at our users meeting in May and our science meeting in June and from other stakeholders we have

heard from that have asked us for a more open and consistent communication from the BioSense program staff.

We also want to use these calls to update BioSense users on the progress we are making on the project and work that is underway at CDC and to provide our important stakeholders the opportunity to ask questions and interact with other users and the CDC team.

Thank you again for joining, I will now turn the call over to Lynn Steele.

Lynn Steele: Hello, everyone, and thank you for joining us. I think this call is a good format, and I especially like the idea that this is real-time/real-talk. We intend to keep it that way.

I am going to give you some updates in four key areas. First, we will describe some of the main issues raised in the users meeting and describe how we are addressing those issues and using your suggestions. This is also part of what Jerry Tokars will talk about. We will talk a bit about our progress, that is, where we are with the implementation of BioSense nationally; provide updates on our evaluation, plans and progress; and then a talk a bit about how BioSense fits into the work of the AHIC, the American Health Information Community.

I will begin with some of the issues raised at the users meeting, which, as you know, was convened at the end of May for hospitals and public health, the first users of real-time BioSense data. We have not yet sent you the summary of that meeting, and we are a bit embarrassed about that. It is working its way through clearance, and we should be sending a high-level summary of that meeting to you shortly.

What we certainly heard at that meeting is that an ongoing dialogue is really important to us and also to defining the future of BioSense as we continue during the data development phase. We very much consider BioSense, both the program and the application, to be in development, and we are working to firm up our plans for that development. An important part of that process is to get your input.

At the users meeting we also heard that in order to resolve some of the issues and to really advance our work, we need to convene small groups of you, the users. Jerry is going to talk about that, about convening meetings not only around open dialogue, but around some very important issues, such as protocols for reach-back to public health and other activities.

Probably the one thing we heard most clearly – and this has been a consistent theme – is that we need to be clear about BioSense's mission, the vision for it, and our approach to achieving that vision. In that regard, we have a lot of very intensive work that will be going on this fall. I will talk a little bit more about that when we talk about evaluation. We know that that evaluation is really what is needed to serve and refine the BioSense program and its application.

Another point raised at the users meeting is that public health departments have their own syndromic surveillance systems in place and are struggling with how to fit BioSense into their overall strategy for local surveillance. This continues to be a challenge. We have adopted an approach to connecting a system of systems, recognizing that there are very good systems and relationships in existence that we need to capitalize on from a national perspective.

We also heard that BioSense has the potential to acquire additional national data that might not be available locally, that it should be a priority for us to get and distribute those data for state and local public health department use, and that it makes sense for CDC to get and distribute these data so that they do not have to be distributed 50 times. We will talk about that when we talk about progress.

Understanding an event on a larger scale is of utmost importance to public health. The ability to have cross-jurisdictional views of what is going on will be important and needs to be part of the planning for how we display the data.

From the hospital user's perspective, we realized very acutely from the users meeting that it is the infection control and hospital epidemiology communities that are engaged in the use of these state and local surveillance systems. These communities have a different perspective on how the data may be used for quality and infection-prevention monitoring. However, the most important capability for hospitals seems to be the ability to connect with public health in order to have the same information that is being shared with public health in real-time.

A very important concept was one that we probably had moved further down our priority list but have now moved back up: for hospitals to be able to see not only their own data but to fit that data into a community picture. We will be developing a plan for providing that kind of aggregate view of the community back to the hospitals.

So those are just some of the key findings that have helped craft our go-forward plan this summer. I will now move on to where we are in the process of implementing BioSense.

I did mention that in order to get more hospitals connected more quickly we began speaking to those state and local health departments with existing systems from which we could get some patient-level data, what we have described as foundational data, that include chief complaint, ICD-9-coded diagnosis, etcetera. Some of the health departments we are in discussion with are Indiana, North Carolina, Ohio, and Seattle. This is being accomplished under the recruitment leadership of Wayne Myers and the Constella Group. We are also interested in working with other systems that can be implemented more quickly.

In total as of today, we have approximately 700 hospitals in some form of implementation. That means that these hospitals have been committed to by their state system or are part of large healthcare systems or individual hospitals who have committed to participation in BioSense. They are going through a technical assessments or the implementation process now.

We fully believe we will achieve our goal of having data coming to CDC from 350 hospitals and being displayed through the BioSense application by the end of December. However, our goals continue beyond the end of December 2006 with our long-term, or what we call our stretch goal, to have 3,500 hospitals by the end of 2009. That is not all of the deeper clinical data that we have been working hard to implement and develop proof of concept for, but of hospitals sending these broader but less deep data sets that involve what we are calling the foundational data.

We have made it a priority to get more real-time data from the Veteran's Administration (VA) and Department of Defense (DoD) to provide to public health and hospital users of the BioSense system. We hope to get some of that real-time data from both of those systems by the end of the year. Regardless, we will be moving the data that are currently being collected from them, that

is, the ICD-9-coded diagnosis data and procedure codes and CPT data, to the same platform as the real-time data so that they can be analyzed and visualized in the same part of the BioSense application. We will be moving to acquire this data, and we are working on the timelines of both these agencies to get their clinical data in real time.

We will be doing similar things for laboratory data. We made it our goal to connect three of the largest commercial laboratories by the end of the year. We are in good negotiation with at least two of them. LabCorp, we believe, will have test orders and results in the new part of the BioSense application. We also believe that Quest will have some laboratory data that will be sharable through BioSense. We will be working with others who have not yet made a commitment.

We also have, as you know, been working with Poison Control Center data and hope to be displaying that data over the coming months through the BioSense application. There has been a lot of discussion about the agreement of data, and now we are working with the association, the American Association of Poison Control Centers, on their timeline to make that possible.

There are a number of other national data sources that we are exploring as pilots that will be coming online over the next three to six months. We are working with the National Retail Data Mart to be able to provide the over-the-counter drug sale data that the RODS folks at the University of Pittsburgh had previously been providing. By our timeline we will not be able to do this until next year, but we are trying to make a two-year pilot commitment to them and will want to hear from you about whether that data is useful for your local picture of syndromic surveillance or for situational awareness.

Another real-time data source in that same regard is prescriptions filled or pharmaceutical claims. We will be validating that up to 75% of those national prescriptions come through the vendor, Per Se, who is based in Atlanta. We will not be looking at all claims but only specific claims that we think would be useful for public health, such as antimicrobials and antivirals.

We are also working with the American College of Emergency Physicians in a test to see if we can get the HAvBED systems, the systems that are reporting emergency departments' surge capacity, as another means to capture census information.

I think you know that we are capturing some census information that needs to be validated from hospital information technology systems locally, but we think that there are compelling reasons that public health would want to see these data alongside other clinical data. We will be working with the American College of Emergency Physicians as a potential aggregator of that information. There will be more to come on that. We also have to have further discussions with our other federal partners at HHS and AHRQ, and HRSA who we want to make sure have access to the same data.

That basically summarizes our progress, and I will be happy to answer any questions you may have.

I want to talk to you briefly about evaluation. When we met with you in May, we told you that Gartner has just started with us. Gartner is an independent IT consulting firm. They have completed the first 30-day assessment of BioSense and are continuing on a six-month assessment. They are also working with CDC and our program to help us implement changes. Some of the quick hits that they identified would help with some improvements across the program.

The first two areas they are looking at and helping us evaluate to ensure we are aligning with industry best practices and best business practices have to do with the technical environment. That environment is our plan and approach to making assessments of our staff or our human capital to ensure that we are planning for the right combination of federal employees and contracted employees.

The third is to help us manage across this multi-contract environment that was necessary for standing up this program, how do we position that and manage it best now but also for the future date, what should the program look like in the next three to five years.

And then the fourth is to help along a programmatic assessment to help us look at how we are managing risks and activities related to the BioSense Program.

So Gartner is serving as an adviser to me, Barry Rhodes, and Jerry Tokars as the leaders of the program internally and are helping us to implement changes quickly and helping us plan best for the future as they continue this evaluation of the program.

In the line of independent evaluations, we put a request for applications into the Federal Register that closed on August 7. We received a number of applications. The Objective Review Panel was convened this past Monday. We should be making decisions about who will be funded from among that group this week.

It will take a number of weeks before anyone is actually notified as the selection works through the PGO (Procurement & Grants Office) process. But

because we are at the end of the fiscal year, there is some incentive to move things along.

There is $2.8 million or so available that has been flagged for independent evaluation. We are not yet sure how that equates to number of awards and will not know until we see how the panels have ranked the applicants and how we determine what the need is for the various aspects of evaluation.

The RFA was pretty broad in looking at data validation systems, utility, usability, and cost-effectiveness, so we will be looking across the applications to figure out which to fund to meet our priority needs. One of the priority needs for evaluation really has been set by the Office of Management and Budget as part of our performance assessment and rating tool. The OMB process is a government process that looks at the soundness of investments or programs across the government.

As part of the assessment of BioSense, the Office of Management and Budget wants us to assess whether a system like BioSense improves the timeliness of public health investigation and response. To do this, we need to determine if the ability to have clinical data in real time is changing the baseline for the amount of time that it takes to initiate an investigation. We will really need some of this evaluation work to help us focus on getting that baseline, to see how long it typically takes to find clinical data or something that needs to be informed by more clinical data, what is the typical time that a public health department takes, and then over the course of the next couple of years to be able to come up with an approach to measure whether BioSense or systems like BioSense help to speed up that time.

The last thing, and I know I am probably going over my time, and Lisa has not cut me off quite yet, is where we are with the AHIC.

As you know, the AHIC is the American Health Information Community, the group that was charged by the President and is being convened by the Secretary of Health and Human Services and the Office of the National Coordinator of Health Information Technology, which has been working to come up with both a longer term five-to ten-year plan for advancing health IT and some very short-term working group activities to make some progress within the next year or two.

There has been, since last fall, a biosurveillance workgroup whose specific charge has been to make recommendations so that within a year essential ambulatory emergency department visit utilization and laboratory results data from electronically enabled healthcare delivery in public health systems can be transmitted and standardized in an anonymized format to authorized public health agencies within 24 hours.

The workgroup has made recommendations to the Secretary of HHS in order to meet that specific charge within the year. Part of the workgroup's recommendations made at the end of May suggested to the Secretary that there needs to be discussion around a minimum data set for biosurveillance.

As part of that decision-making around what the data should comprise, that is, what is absolutely necessary for informing event detection, situational awareness, outbreak management, and response management, we convened last July a Biosurveillance Data Steering Group made up of local, state, and federal public health agencies and clinical care experts. That steering group will look at the recommendations of workgroups from the past eight months and come up with recommendations for a minimum data set. That data set will then be given to another group, which is part of the American Healthcare Information Community process is the Health Information Technology

Standards Panel (HITSP). HITSP will take the recommendations for the minimum data set and come up with national recommendations for how those data need to be standardized.

All of this is moving us toward a standard infrastructure, standard vocabulary, and messaging. We think BioSense is right in alignment with that. In fact, because BioSense had to produce a standard as early as last year for real-time data, we are actually helping in some ways to drive those standards and helping the HITSP and others recognize where there are gaps in those standards.

We are following the work of the AHIC closely. I am actually on the Biosurveillance Data Steering Group as a federal representative, and it has been a very good discussion. We will keep everyone informed as those recommendations are made.

So with that, I will turn this discussion back to Lisa who will introduce the next part of the agenda.

Lisa Hines: Dr. Jerry Tokars, who is our Associate Director for Science, will now give us an update on the topical working groups that were first announced in the BioSense bulletin that came out at the end of July and that we are hoping to begin hosting in September. Dr. Tokars?

Jerry Tokars: Hello.

At the face-to-face meeting that we had in May a couple of different topic areas were identified for continued discussion and input. Two of those that we have decided to begin with and have conference calls and ongoing consultations about would be, first, the BioSense application, the visualization

of the data, and second, investigation protocols. How do we look at the data? What do we think is important? Then we must begin to think about how we would contact state officials and start looking into the data a bit more.

Let me just start off by saying that we would be proposing to have separate working groups convened mostly by conference call and possibly webinar to go over these two topic areas.

Starting off with the BioSense application, I will first mention that there are several changes in the application that are slated to occur around mid-September. Most of these will be centered more or less on the ability to differentiate among what we call patient classes, that is, what the differences are among outpatients, hospital inpatients, and emergency department patients.

Being able to make those differentiations necessitated several changes in the BioSense application, changes in the titles, in the selection screens, and in the data analyses. Although these are conceptually fairly simple changes, they have rippled throughout the application and required a lot of work. Once again, these changes are slated for September. After they are made, we would like people to look at the changes we have made and give us their general reactions to the application. We also have one specific new module that has been on the drawing board for a long time for which we would like to get your help in planning. That is the Custom Event Creator.

As people are aware now, we have 11 syndromes that we do data analysis and visualization on, and also 78 subsyndromes. The Custom Event Creator would allow you to create custom events, such as being able to edit current syndromes and subsyndromes or create new ones that are of interest to you.

That would be one of the main ideas that we would like to look at in the application working group.

Moving on to the investigation protocol, we should first mention that there are some fairly minor changes in the data analysis methods that are slated for the probable mid-September release of the application. We will be using a data analysis method that is a modification of the EARS C2 algorithm. For a couple of years now, BioSense actually has been using a slight variant of that, and I will not go into detail except to say that it basically means that weekdays are compared to weekdays and weekends to weekends. We will be making that small change and then concentrating on using that C2 algorithm. We will express the level of significance as a recurrence interval, number of days. So that is basically a P value of 0.01 or would be equivalent to a recurrence interval of 100 days. That is a standard that is used in various other surveillance systems.

Once we make that change, the issue is then how do we look at the data in a little more detail? We will continue to have a fair number of data anomalies. How do we prioritize those for investigation? How do we hone in on the ones that might potentially be of public health importance, and then how do we start notifying state and local officials about that so that they can do an investigation? We will have a draft protocol on how to look at the data, how to prioritize anomalies for further investigation, and we will show that to the group and get comments on that.

This has been a general outline of these two topic areas. We do not have definite dates for the conference call yet. I think Lisa will probably announce to the group the dates and arrange to send email notification about the calls.

That is all I have to say. So I will turn the call over to Lisa.

Lisa Hines: Thank you.

In the July issue of our new communication effort, the BioSense Bulletin, which we started this summer, we announced formation of the Topical Working Groups. That announcement included an email address that you can use to sign up if you want to participate in that group. We will be publishing that bulletin again in August. The address is pretty simple, it is biosenseusers@cdc.gov – and that does have an *s* on the end. So if you are interested in joining one of the topical working groups, you can send a short email to that address, and in the topic line or in the email somewhere let us know which group you are interested in. When we are ready to get started with those in September, we will contact you and give you more information.

I think at this point we are ready to open up the rest of our time for questions and discussions. Our coordinator will go ahead and give a short announcement, and then we will open up for questions. Thank you.

Coordinator: At this time we are ready to begin questions and answers. If you would like to ask a question, please press star-1. You will be announced prior to asking your question. To withdraw your question, press star-2.

Matt Laidler, you may ask your question.

Matt Laidler: You had mentioned that you are working with the RODS laboratory to get over-the-counter drug data. You also stated that this in some part will depend on the substance or the value of the data. I am wondering how you are going to assess that. At the state level here in Florida we have used these data, sometimes infrequently, but there are around 50 users here that consider the data to be very valuable. I am wondering how you are going to make the

assessment in terms of where that data will be incorporated into the BioSense system.

Lynn Steele: That is a great question. I did not mean to be misleading. What we have done is make a two-year commitment to make that assessment. We have heard from you and others that the data are useful for your specific needs. I guess the question is, is it data that is useful for a broad constituency of our partners? We will be reaching back to you to make that decision over the next two years, whether those data types should continue as part of BioSense. I think that your assessment would be that the data have been useful and will continue to be useful.

A lot of what we are doing is making assumptions about whether these data can be useful from a national perspective. I am not sure that the over-the-counter drug sale data from CDC's perspective will be that helpful. I think the data will be useful if you are really honing in on what is going on and know things that are happening locally that might change and drive drug sales.

CDC had some high level discussions with Wal-Mart this week about a number of different potential collaborations around health. How they think about and plan for reallocation of supplies and the whole supply chain management is really interesting, and that is something that we think about. But many of the principles that Wal-Mart follows could be part of the way we look at our own information about human behavior and health. We are in different worlds, and we could learn a lot from them.

I guess what I am saying is, we will be getting the data for at least two years and then looking at resource availability and other usefulness indicators to make decisions about whether to go forward. I would say that is true with a lot of the data. All of these data have to be supported in data warehouses, in the

application and in ways that we analyze the data and make them useful to you. There may come a time when we have to make choices about what is the most useful data to continue supporting.

Coordinator: Edith Sarino, you may ask your question.

Edith Sarino: I am an epidemiologist in a county in Arizona, and as far as I know, all the Arizona counties are on BioSense right now. I was kind of interested in the discussion about what you call workflow – analysis flow –, that on the federal level potentially in the statistical analysis for the signals, anomalies might happen, and then someone at the state would be notified of anomalies and then presumably someone at the appropriate local level.

Here among locals, there has been a lot of discussion about how to interpret the different signals that are coming in. I was curious as to whether the onus for analyzing the signals is going to be on locals or is it going to be more top-down?

Lynn Steele: I will answer, and then I will let Jerry answer. We see this as really a shared responsibility. It is a single system that is allowing simultaneous use of the same data by all levels of public health. It is enabling the use of data in data analysis that right now is in clinical IT systems and in health data system that no one has access to. I think how we look for signals, how we interpret signals, really is a learning experience and a shared experience. The commitment that we are making is that we feel we have an obligation as we receive these data to develop our staff and our expertise to look at the data and learn how to provide the right level of technical assistance to state and local public health. That is CDC's responsibility.

Just as with any other fairly new discipline, I think local public health and local epidemiologists, whether it is state or local health departments, will also be learning how to look at these fairly large and timely data sets. So I would not say it is top-down or bottom-up, but that it is a shared responsibility. As we learn how to best use these data especially for situational awareness -- I think there will guidance about what should be looked for in these data sets regardless again of whether it's CDC looking for those or you looking for those and working together.

Jerry, do you have anything to add to that?

Jerry Tokars: Yes. I think that is a very good perspective, that we will be coming up with a way to more or less prioritize these signals. And we will try to look at a certain number of them here each day. But we will not look at all of them, especially ones that are lower level. And it will be very valuable for local people who have some different perspectives and local knowledge and may have other data sources that we do not know about. Looking at those in combination would be really valuable. I especially agree with what Lynn says, that it is a shared responsibility, and we do not have final protocols available yet for how we are going to do that.

Edith Sarino Thank you.

Coordinator: Jim Miller, you may ask your question.

Jim Miller: I am from the New York State Department of Health. The data that is currently visualized or presented on BioSense is the clinical data received from VA and DoD. With the 350 hospitals that you hope to have transmitting data to you by the end of the year, will those hospital data also be made available in the same way that the DoD and VA data currently are?

Lynn Steele: This is Lynn, and I will answer for Jerry because we might answer a little differently.

Right now, you can only see the VA and DoD data, because there are no other New York hospitals that are participating in this new real-time effort. There is actually a different part of the application that displays the new data, the real-time hospital data. So the application looks different, the analytics are different, and the way you can sort data are different.

We will be moving all of the VA and DoD data to that other part of the application, and that hospital data will then become visible to you as well. We are trying to make decisions about priorities and timelines. The current VA and DoD data was warehoused, and the data warehouse was developed in a different model. So there are some complexities with doing that, but we think the way Jerry has developed the analytics and the visualization has guided us to the development of a system that is superior to what has been used for the past three or so years with the VA and DoD data.

Jerry, do you want to add anything to that?

Jerry Tokars: Yes. The bottom line is that when there are hospitals from New York State that are participating, then you will see that data, plus all other data types that are in the application.

Lynn Steele: Was that clear or did we confuse you?

Jim Miller: No, I think you answered my question. Do you have a timeline for that?

Lynn Steele: Getting New York hospitals data?

Jim Miller: No. For the hospitals that you do have. You said you are going to have 350 by the…

Lynn Steele: We are currently displaying data from over 40 hospitals through the application. As hospitals come online, they are added to that new part of the application. The only reason you cannot see it as the BioSense administrator from New York is because there are no New York hospitals sending data in real-time yet.

Jim Miller: Okay. And one quick follow up. Are you presenting the clinical information from these new hospitals as syndrome counts?

Jerry Tokars: Yes, both syndromes and subsyndromes.

Jim Miller: Okay. Thank you.

Lynn Steele: Those 11 syndromes were broken apart, and additional clinical subsyndromes were added. So for example, instead of just having something called botulism, you can actually look if you are only interested in paralysis. Jerry and his team added some categories that include those things that might be associated with a trauma event – injuries, etcetera.

Jim Miller: I would point out that you are getting so much additional data compared to what most of our syndromic systems are getting. From what I previously heard, you are getting all sorts of clinical information every 15 minutes, and you are classifying the information into syndromes. I guess that at some point you are anticipating that you may have additional categories of activity other than the syndromes that are currently in place that you are trying to use to categorize clinical activity.

Jerry Tokars: Yes, and the first step towards that is the subsyndromes, which we do break up a lot more. As for other manifestations, we are hoping that our Custom Event Creator will allow you to select your own list of ICD-9 codes, for example, and create a custom event along those lines.

Of course, as we get laboratory data and those will be event-related data - just having a positive blood culture for Staphylococcus aureus, or whatever, would be an event also. Appropriate outcome events will be added as we get more data.

Lynn Steele: Even though we are beginning laboratory, radiology, and pharmacy data, those are not yet displayed in the BioSense application. I think what you are pointing to is that there are many ways that this data will be useful. Deciding what is analyzed or put through some analytics on a regular basis is going to be a challenge and a learning experience for all of us. All of these data offer the real opportunity to combine various aspects of the data to come up with what might create those infection alerts. A lot of that work will go on in the next year as we continue to learn how to best use, display, and query these various data types.

We really are in our infancy with using these data biosurveillance and with this whole field of public health informatics – what it really means to use these large data sets.

Coordinator: Jain Chen, you may ask your question.

Jain Chen: You have mentioned that the national laboratory will send you test orders and test results. My question is, do test orders include everything or just reportable conditions?

My second question is, do you have a method for identifying information that comes to you, because state law requires that you report information to the state, too? So are the laboratories supposed to report to you and to the state at the same time?

Lynn Steele: We are getting data to help with biosurveillance purposes. Just as with BioSense, it will be data primarily about microbiology-related results. That will not have a patient identifier, but we will be able to assess what is going on in the local community. The protocols for re-identifying that person from the national laboratory will be similar to how local public health would identify a specific patient in a hospital that was recording data for BioSense, meaning local public health can go back to the data source, either the hospital or the laboratory, to find out who that person is.

The data are being shared for a biosurveillance purpose. We are doing that and helping the national laboratory companies. Commercial laboratories standardize their data and put them in a standard terminology to enable electronic exchange of that data. All of those activities should help advance electronic laboratory reporting and help with the connection to electronic laboratory reporting.

But it will not happen until we make the local direct connection with the additional data elements that are required for mandatory disease reporting, such as names and other information verification, until we determine from an epidemiologic perspective that indeed this is a reportable condition. We are helping to lay the framework for that by implementing the standards and the capability for electronic data exchange. But it is not going to meet all of those needs immediately. Certainly that is the future.

We are working with the national laboratories to help them develop a plan to somewhat relieve them of the burden they have of reporting the national laboratory data to every individual state and local community.

Dr. Barry Rhodes is here in the room with us. He is our Associate Director for Technology and Informatics, and he has taken a lot of the lead to make sure we are planning for that for the future and working across CDC's other programs, other reportable disease, NEDSS, and other activities to try to move towards bringing these activities together.

Coordinator: Eric Adler, you may ask your question.

Eric Adler: My question is in regard to the recruiting of new hospitals. Are there costs associated with that to locals? Are hospitals charging maintenance fees, service fees that type of a thing?

Lynn Steele: We pay hospitals a maintenance fee, more or less. The way the recruitment works, we work through local public health for those health systems within a jurisdiction. Where we are working with hospital systems across jurisdictions, we will work with state and local health departments that are affected when we get the commitments from those systems.

Basically, the hospital committing usually requires the CEO, the chief information officer, the head legal people, the HIPAA compliance officers, and laboratory and clinical people to agree that this is a good thing for them to share this data with public health. A data-sharing agreement is developed between CDC and that healthcare institution that broadly describes how the data will be used for public health. Thus, CDC is signing for local public health use of the data but describing how the data will and will not be shared otherwise.

After those two things are done, a technical assessment of the existing system within the healthcare facility is done to compare what is existing and what is needed to get the data from that system into the standard, what we call the BioSense Messaging Guide, or the standard format for HL7 messages, the standard vocabulary that is being promulgated – SNOMED and LOINC for lab data for example. A work plan is then developed with that healthcare entity with a discussion about the number of hours required for the IT staff in the hospital. If the IT staff cannot do the work, the hospital can subcontract the work or they can use CDC's contractor, which is SAIC, to do some of the work.

There is hardware and software that is installed to develop that patient randomize linker so that public health can go back and re-link the patient with the hospital as needed to put in what we call a BioSense integrator or a tool that captures that HL7 messages of interest as they are moving between various hospital systems. For each hospital, there is a work agreement that our contractor, SAIC, develops with the hospital that is signed by CDC. Barry Rhodes is the person that has been reviewing all of those to make sure the scope of work is appropriate.

For each hospital, we include some ongoing maintenance for their IT staff through the end of this contract period, which is May of 2008. It is the expectation that we are helping the hospitals implement some data standards or some interfaces. These may have been part of their plans to enable their own exchange of information either within their healthcare system or to support activities locally related to regional data exchange so that the long-term ongoing support would be minimal or the responsibility of the hospital.

Coordinator: Allen Craig, you may ask your question.

Allen Craig: Lynn, Jerry, as a representative of CSTE, I just want to thank you for having this call. I think it is very valuable. I also want to thank you for setting up future calls to talk about applications and investigation protocols. We really appreciate the opportunity to give feedback and participate with you in this.

Lynn Steele: Thank you.

Coordinator: Amy Belflower, you may ask your question.

Amy Belflower: I know you are talking about actually getting some of the data streams from current state and local health departments who have syndromic surveillance. But I have heard previously about states and locals being interested in getting the actual data streams that you guys are getting from hospitals for their syndromic systems if they do not currently have that hospital online, and so forth. So I was wondering how that process was going. And I know Lynn spoke at the June CSTE conference about how that was going to happen with a couple of states. I was wondering how that was progressing.

Lynn Steele: Barry may be able to speak to that. I just want to say publicly that we are absolutely committed to helping state and local public health to get that split data stream. If there is a reason to have the data stream, we will split the data stream.

You have also heard me say that getting the data to a standard that ensures the data mix, has, it is true, been difficult. We have just begun to talk to some states who want that split data stream. But we are still in many cases going back to the original healthcare facilities, and this is my lack of appropriate terminology, fixing data elements that might not be quite right.

We are committed to splitting the data stream. We are trying to time it so the data that state and local public health gets are the best possible and are useful to them. But what it will require for state and local public health to receive the data stream is the PHIN MS, the PHIN Messaging Server – the receiver end of that. We have a technical group at CDC that will work with state or local public health to help install that system so that the data can be received. We have funding to do that. We are just looking at the timeline and ensuring that we have sound data. State and local health departments will have the same problems that we are having at CDC with the integrity of the data. We are just trying to get it to a more steady state. We are absolutely committed to providing that data to anyone who wants it.

Barry, can you talk specifically about the pilots? But first, we should not call them pilots.

Barry Rhodes: We have had discussions with several states about merging these technologies. The advantage here, of course, is that we are using the same standards as have been promulgated through the PHIN requirements. It is just a matter of connecting the wires. But it does take discussions, and we have had discussions with Nebraska, Texas, Ohio, and several other places about where best to do this and how we might proceed forward, about how we might leverage this existing information for other uses within state and local health departments. These discussions are ongoing. We do not have a working pilot now, but I think it is imminent.

Lynn Steele: We probably should not use the word “pilot.” We are piloting the experience but we want to take that experience and roll it out to whoever has that desire. At the same time, the preprocessing of the data is not minimal. The way you have to unwrap those HL7 messages and then put them into a data queue and make them ready in analytical data marks for display into whatever the

application is – that is not an easy process. We want to make the BioSense Web-based application as easy as possible for state and local public health to use.

There is a commitment to make the BioSense application so useful that, hopefully, there will be only a minimal amount of data you want to work with yourselves in your state or local system. There is some efficiency and some resources that can be leveraged there. We know that there are some communities that probably are more capable and have more people who might be able to use their local data than we are here. We recognize that for anyone who wants their data, we will make sure we are providing that same data stream.

Coordinator: Lei Chen, you may ask your question.

Lei Chen: I have one comment and one question. The comment is about the usefulness of the NRDM data. I am working for a local health department, and we have been using NRDM every day since the end of 2004. We have found that this is a very useful data source and a very useful tool that is easy to use. NRDM is very useful for our day-to-day work, especially for GI illness, outbreak investigations, or situational awareness about GI illness in the community.

My question is this. In our community, we have four hospitals, and right now, we are using RODS. We connected to all four hospitals one year ago. Would you comment on how much extra time the hospital IT folks will have to spend if we switch the RODS system to BioSense? The reason I am asking this question is because it takes a pretty long time from the beginning to the final connection including the data use agreement we have to review, legal review, and setting up the interface. Actually, the time the hospital IT folks spend on this was much more than we expected.

We do not want BioSense to bring too much inconvenience to the hospital staff, but I am wondering what your opinion is about switching systems.

Lynn Steele: Maybe you do not have to switch systems. We are also looking at whether we can use the data you are already getting into RODS to be implemented as a data feed into CDC.

Whether to work directly with the hospitals to have them then report to BioSense – those decisions really have to be made on a local level based on what your local plans are and your state plans.

Wayne Myers and his team at the Constella Group are contracted to do that sort of outreach for us. If you will tell me your location, I will make sure he gets in touch with you or has someone on the team get in touch with you, because I think this is the beginning of the longer conversation.

We want you to share data with BioSense whether that is to go back directly to the hospitals, whether that is feasible depending on the size of those hospitals if they are linked with other hospitals in a larger healthcare system, and how they fit into out timeline and calendar – all this is part of this decision-making process right now.

Lei Chen: So there was one person probably to contact an IT provider. I am raising this question because right now we need to pay an extra fee to maintain those four connections. But if BioSense is free – and I evaluated the system, and it is a pretty good system – if we can get a free system rather than pay….

Lynn Steele: Right. But it is not immediate is my point. It is not free in some ways. I mean, we have funding that we get appropriated, and so we are helping the hospitals

do this. But it all has to be done. I wish we could just implement everything, turn the switch on and have the data flow from the hospitals, but it is not that quick either.

Lisa will give the contact information again for how to send a follow-up email as a result of this conference call so we can help you make the right connections to have this discussion.

Coordinator: Abe Escarza, you may ask your question.

Abe Escarza: I am with Maricopa County. I was wondering if I can get some clarification on one thing. The funding stream that you mentioned as far as assisting health departments at the state or local levels to get a portion – a feed off of BioSense – that funding stream is limited to just advising how to get the stream situated in your public health department. It does not actually give any hardware, software, or any other funding ability to the locals or the states to actually set that system up. Is that correct?

Lynn Steele: I am not sure what you are referring to. No, there is no funding stream to provide money to state or local public health departments. What is available is funding to send out teams to implement the software at a state or local public health agency that would allow them to receive data that is being transmitted over the PHIN Messaging Server. So it is the PHIN receiver. The funding helps with that piece, implementing that software and supervising and providing technical assistance to state or local public health to use the software.

Jerry Tokars: There is technical assistance available outside of BioSense that might be available through other mechanisms to implement this infrastructure – NEDSS Base System, the Message Subscription Service, things like that –

that could be leveraged to receive the data that BioSense per se does not fund directly to state and local health departments.

Lynn Steele: We are funding to ensure that the technical group can help with this BioSense implementation.

Abe Escarza: So what I understand is it is just the technical portion of getting that online but not any actual hardware for the receivers to actually have on the other side. That is going to have to be funded through other sources or grants, correct?

Lynn Steele: Correct.

Abe Escarza: Okay.

Lynn Steele: What we are hoping is that we are developing a national system or a system that is useful for state and local public health departments.

Abe Escarza: One more question. Working with the Constella Group here locally, with the state as well, we were all trying to understand what type of data CDC is basically committed to delivering to the state and local health departments. Is it going to be the raw data or the stripped data? In talks with the Constella Group, they basically wanted to check back with CDC.

Lynn Steele I do not know what that means. What we would do is share the same data that we are getting at CDC. So it would be…

Abe Escarza: Well, prior to the data being sent, it has got to be stripped of identifiers.

Lynn Steele: Oh, right. It is the same data stream, so we do not want to associate all of this clinical data with specific patients. Just as now, you would have to have

relationships with your local clinical providers or hospitals to re-identify the patient.

Abe Escarza: So, in the future will there be ideas like…North Carolina building in a backdoor where patient specific information is accessible by public health or would depend on the relationships between public health and the hospitals?

Lynn Steele: Correct. And that is what we have said. Because there is a lot of clinical data here, it makes sense to us to keep that data anonymous unless there is a compelling public health reason to go back and re-identify the patient. There is a Web-based linker that will help the hospital to re-identify the patient where they are queried by local public health.

Now in some jurisdictions, the healthcare institution is so linked into and so trusting of their local health agency that they would not be looking back unless there was a compelling need. They are given access directly to the local public health agency. But that is a decision that is negotiated and made locally.

Coordinator: There are no further questions at this time.

Lisa Hines: Well, I think we have come to the end of our scheduled hour. I would like to repeat the email address that you can use if you have follow-up questions or if you are interested in joining one of the topical working groups that Jerry Tokars described. It is biosenseusers@CDC.gov, and that is with an *s* on the end.

Thank you all very much for participating. We have committed to hosting these calls quarterly, but in my calculation, that puts us right at Christmas time for the next one. So I think we will probably move that to the beginning of

January. Please be looking for the next real-time/real talk call to happen at the beginning of the year.

Thank you all very much.

END